26816

National Library of Canada | Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE | THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR / NOM DE L'AUTEUR Marcel Raoul LAVALLEE

TITLE OF THESIS / TITRE DE LA THÈSE Student Attitudes and Motivation in a Bilingual School

UNIVERSITY / UNIVERSITÉ University of Alberta

DEGREE FOR WHICH THESIS WAS PRESENTED / GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE (M. Ed) Master of Education

YEAR THIS DEGREE CONFERRED / ANNÉE D'OBTENTION DE CE GRADE 1975

NAME OF SUPERVISOR / NOM DU DIRECTEUR DE THÈSE Dr. Metro Gulutsan

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED / DATÉ Dec 16 1975 SIGNED / SIGNÉ Marcel Lavallée

PERMANENT ADDRESS / RÉSIDENCE FIXE 14707-87 Ave.
Edmonton, Alberta
T5R 4E5

NL-91 (3-74)

THE UNIVERSITY OF ALBERTA

STUDENT ATTITUDES AND MOTIVATION IN A BILINGUAL SCHOOL

BY

MARCEL RAOUL LAVALLEE, (C)

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE

DEGREE OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1975

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "Student Attitudes and Motivations in a Bilingual School" submitted by Marcel Raoul Lavallée in partial fulfilment of the requirement for the degree of Master of Education.

M. Gulutsan
Supervisor

V. R. Nybus

Douglas V. Parker

Date: September 3, 1975

ABSTRACT

A junior-senior bilingual high school in Edmonton, Canada served as the locale for the investigation of student attitudes and motivation to the study and use of the French language.

The investigator administered a questionnaire he prepared to describe the students' ranking on six different measures of attitudes and motivation to second-language learning. Analyses of variance were performed to determine whether any of these measures of attitude and motivation differed for the following student variables: sex, grade, fluency in two or three languages, residency or non-residency in a French community for a period of at least six months, socioeconomic status and degree of bilingual balance. A sex by grade frequency count of student responses to certain items of the questionnaire was included in the results. The items were selected as being those most pedagogically relevant and useful to the administrators and staff of the school.

The major findings of this study can be summarized as follows:

1) Female students, students who had resided in a French community for a period of at least six months, students from the lower socioeconomic strata and students who were French-dominant on the measures of bilingual balance expressed the highest level of motivation to learning.

2) The majority of students recognize the value and importance of bilingualism but waver in their resolve to gain bilingual

fluency.

3) The amount of parental-family encouragement and influence to French study as reported by the students was not as great as expected.

4) The majority of students subscribe to both integrative and instrumental orientations to French language study. However the integrative orientation is the more predominant of the two, especially at the senior high level.

5) Students in general expressed satisfaction with the French program and the curricular materials it uses.

6) Students in general view themselves as having a fair command of the French language.

ACKNOWLEDGEMENTS

To Dr. M. Gulutsan, the supervisor of the thesis, who gave much advice and encouragement during the course of this study,

To Dr. V. Nyberg whose assistance was so valuable in the preparation of the questionnaire,

To Dr. D. Parker for his valuable comments and critiques,

To Colin Park of the Division of Educational Research, who gave so generously of his time and expertise in facilitating the statistical treatment of the data,

To the staff and students of Ecole J.H. Picard School whose constant cooperation was essential to the conduct of this study,

And finally to my wife, Louise, whose encouragement, patience and countless hours at the typewriter ensured the completion of this study,

To these and all those who in one way or other were instrumental in completing the various phases of the study, the writer wishes to express his indebtedness and gratitude.

TABLE OF CONTENTS

	PAGE
LIST OF TABLES	ix
CHAPTER	
I. THE PROBLEM	1
Introduction	1
Need for the Study	3
Purpose of the Study	10
Definition of Terms	12
Design of the Study	13
Assumptions	13
Delimitations	14
Limitations	15
II. RESEARCH AND THEORY	17
Theory	17
Related Research	22
III. DESIGN OF THE STUDY	33
The Questionnaire	33
The Pilot Study	39
Data Collection	31
Tabulation of the Data	42
Statistical Treatment of the Data	43
IV. DISCUSSION OF THE RESULTS	45
Discussion of Major Findings of the Study	48
Student Answers to Selected Items of the Questionnaire	67

CHAPTER PAGE

V. SUMMARY, IMPLICATIONS AND FURTHER RESEARCH 84

Summary 84

Results 86

Implications 89

For Further Research 97

FOOTNOTES 100

BIBLIOGRAPHY 102

APPENDIX A 107

APPENDIX B 125

APPENDIX C 127

APPENDIX D 129

LIST OF TABLES

TABLE		PAGE
1	Major Summary of Findings	83
2	Number of Students by Sex and Grade Participating in the Study	130
3	Sex Differences in Students' Perceptions of Their Achievement in French	131
4	Two Way Analysis of Variance of Students' Perceptions of Their Achievement in French According to Sex and Grade	132
5	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Perceptions of Their Achievement in French, Identifying Source of Variance Between Grades	133
6	Summary of Means and Variances for Students' Perceptions of Their Achievement in French According to Their Ranking on Word-Completion Balance Measure . . .	134
7	One Way Analysis of Variance for Students' Perceptions of Their Achievement in French According to Their Ranking on the Word-Completion Balance Measure . . .	135
8	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Perceptions of Their Achievement in French, Identifying Source of Variance Between Groups According to Their Ranking on the Word-Completion Balance Measure	136

TABLE		PAGE
9	Summary of Means and Variances for Students' Perceptions of Their Achievement in French, According to Their Ranking on Word-Association Balance Measure	137
10	One Way Analysis of Variance for Students' Perceptions of Their Achievement in French According to Their Ranking on the Word-Association Balance Measure	138
11	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Perceptions of Their Achievement in French, Identifying Source of Variance Between Groups According to Their Ranking on the Word-Association Balance Measure	139
12	Summary of Means and Variances of the Students' Perceptions of Their Achievement in French According to Their Ranking on the Socioeconomic Scale . . .	140
13	One Way Analysis of Variance for Students' Perceptions of Their Achievement in French According to Their Ranking on the Socioeconomic Scale	141
14	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Perceptions of Their Achievement in French, Identifying Source of Variance Between Groups According to Their Ranking on the Socioeconomic Scale	142
15	Sex Differences for Each Grade in Students' Satisfaction with the French Program	143

TABLE		PAGE
16	Two Way Analysis of Variance of Students' Satisfaction with the French Program According to Sex and Grade	144
17	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Satisfaction with the French Program, Identifying Source of Variance Between Grades	145
18	Summary of Means and Variances for Students' Satisfaction with the French Program, According to Their Ranking on Word-Completion Balance Measure .	146
19	One Way Analysis of Variance for Students' Satisfaction with the French Program, According to Their Ranking on the Word-Completion Balance Measure	147
20	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Satisfaction with the French Program, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Completion Balance Measure	148
21	Summary of Means and Variances for Students' Satisfaction with the French Program, According to Their Ranking on Word-Association Balance Measure	149
22	One Way Analysis of Variance for Students' Satisfaction with the French Program, According to Their Ranking on the Word-Association Balance Measure	150

TABLE PAGE

23 Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Satisfaction with the French Program, Identifying Source of Variance Between Groups of Students according to Their Ranking on Word-Association Balance Measure 151

24 Summary of Means and Variances of the Students' Satisfaction with the French Program, According to Their Ranking on the Socioeconomic Scale 152

25 One Way Analysis of Variance for Students' Satisfaction with the French Program, According to Their Ranking on the Socioeconomic Scale 153

26 Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Satisfaction with the French Program, Identifying Source of Variance Between Groups of Students According to Their Ranking on the Socioeconomic Scale 154

27 Sex Differences for Each Grade in Students' Instrumental Orientation to the Study of French . 155

28 Two Way Analysis of Variance of Students' Instrumental Orientation to the Study of French According to Sex and Grade 156

29 Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Instrumental Orientation to the Study of French, Identifying Source of Variance Between Grades 157

TABLE		PAGE
30	Summary of Means and Variances for Students' Instrumental Orientation to the Study of French, According to Their Ranking on Word-Completion Balance Measure	158
31	One Way Analysis of Variance for Students' Instrumental Orientation to the Study of French According to Their Ranking on the Word-Completion Balance Measure	159
32	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Instrumental Orientation to the Study of French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Completion Balance Measure	160
33	Summary of Means and Variances for Students' Instrumental Orientation to the Study of French, According to Their Ranking on Word-Association Balance Measure	161
34	One Way Analysis of Variance for Students' Instrumental orientation to the Study of French, According to Their Ranking on the Word-Association Balance Measure	162
35	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Instrumental Orientation to the Study of French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Association Balance Measure	163

TABLE		PAGE
36	Summary of Means and Variances of the Students' Instrumental Orientation to the Study of French, According to Their Ranking on the Socioeconomic Scale	164
37	One Way Analysis of Variance for Students' Instrumental Orientation to the Study of French, According to Their Ranking on the Socioeconomic Scale . . .	165
38	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Instrumental Orientation to the Study of French, Identifying Source of Variance Between Groups of Students According to Their Ranking on the Socioeconomic Scale	166
39	Sex Differences for Each Grade in Students' Integrative Orientation to the Study of French. .	167
40	Two Way Analysis of Variance of Students' Integrative Orientation to the Study of French According to Sex and Grade	168
41	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Integrative Orientation to the Study of French, Identifying Source of Variance Between Grades	169
42	Summary of Means and Variances for Students' Integrative Orientation to the Study of French, According to Their Ranking on Word-Completion Balance Measure	170

TABLE		PAGE
43	One Way Analysis of Variance for Students' Integrative Orientation to the Study of French, According to Their Ranking on the Word-Completion Balance Measure	171
44	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Integrative Orientation to the Study of French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Completion Balance Measure .	172
45	Summary of Means and Variances for Students' Integrative Orientation to the Study of French, According to Their Ranking on Word-Association Balance Measure	173
46	One Way Analysis of Variance for Students' Integrative Orientation to the Study of French, According to Their Ranking on the Word-Association Balance Measure	174
47	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Integrative Orientation to the Study of French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Association Balance Measure	175
48	Summary of Means and Variances of the Students' Integrative Orientation to the Study of French, According to Their Ranking on the Socioeconomic Scale	176

TABLE		PAGE
49	One Way Analysis of Variance for Students' Integrative Orientation to the Study of French, According to Their Ranking on the Socioeconomic Scale	177
50	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Integrative Orientation to the Study of French, Identifying Source of Variance Between Groups of Students According to Their Ranking on the Socioeconomic Scale	178
51	Sex Differences for Each Grade in Students' Motivation to Study and Use French	179
52	Two Way Analysis of Variance of Students' Motivation to Study and Use French According to Sex and Grade	180
53	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Motivation to Study and Use French, Identifying Source of Variance Between Grades	181
54	Summary of Means and Variances for Students' Motivation to Study and Use French, According to Their Ranking on Word-Completion Balance Measure	182
55	One Way Analysis of Variance for Students' Motivation to Study and Use French According to Their Ranking on the Word-Completion Balance Measure	183

TABLE		PAGE
56	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Motivation to Study and Use French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Completion Balance Measure	184
57	Summary of Means and Variances for Students' Motivation to Study and Use French, According to Their Ranking on Word-Association Balance Measure	185
58	One Way Analysis of Variance for Students' Motivation to Study and Use French According to Their Ranking on the Word-Association Balance Measure	186
59	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Motivation to Study and Use French, Identifying Source of Variance Between Groups of Students According to Their Ranking on the Word-Association Balance Measure. .	187
60	Summary of Means and Variances of the Students' Motivation to Study and Use French, According to Their Ranking on the Word-Association Balance Measure	188
61	One Way Analysis of Variance for Students' Motivation to Study and Use French, According to Their Ranking on the Socioeconomic Scale . . .	189

TABLE		PAGE
62	Probability Matrix Based on Scheffe Multiple Comparison of Means for Students' Motivation to Study and Use French, Identifying Source of Variance Between Groups of Students According to Their Ranking on the Socioeconomic Scale	190
63	Sex Differences for Each Grade in Parental-Family Influence to Use French	191
64	Two Way Analysis of Variance of Parental-Family Influence to Use French, According to Sex and Grade .	192
65	Probability Matrix Based on Scheffe Multiple Comparison of Means For Parental-Family Influence to Use French, Identifying Source of Variance Between Grades	193
66	Summary of Means and Variances for Parental-Family Influence to Use French, According to Student Ranking on Word-Completion Balance Measure	194
67	One Way Analysis of Variance for Parental-Family Influence to Use French, According to Student Ranking on Word-Completion Balance Measure	195
68	Probability Matrix Based on Scheffe Multiple Comparison of Means for Parental-Family Influence to Use French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Completion Balance Measure	196

TABLE		PAGE
69	Summary of Means and Variances for Parental-Family Influence to Use French, According to Student Ranking on Word-Association Balance Measure	197
70	One Way Analysis of Variance for Parental-Family Influence to Use French, According to Student Ranking on Word-Association Balance Measure . . .	198
71	Probability Matrix Based on Scheffe Multiple Comparison of Means for Parental-Family Influence to Use French, Identifying Source of Variance Between Groups of Students According to Their Ranking on Word-Association Balance Measure	199
72	Summary of Means and Variance of Parental-Family Influence, According to Student Ranking on the Socioeconomic Scale	200
73	One Way Analysis of Variance for Parental-Family Influence to Use French, According to Student Ranking on the Socioeconomic Scale	201
74	Probability Matrix Based on Scheffe Multiple Comparison of Means for Parental-Family Influence to Use French, Identifying Source of Variance Between Groups of Students According to Their Ranking on the Socioeconomic Scale	202
75	Comparison Between Bilingual Students and Students Knowing a Third Language on the Six Variables . .	203
76	Comparison Between Students Who Have Lived in a	

TABLE		PAGE
	French Community and Those who Have Not on the Six Variables	204
77	Sex by Grade Frequency Count in Percentages on Question 10	205
78	Sex by Grade Frequency Count in Percentages on Question 11	206
79	Sex by Grade Frequency Count in Percentages on Question 13	207
80	Sex by Grade Frequency Count in Percentages on Question 15	208
81	Sex by Grade Frequency Count in Percentages on Question 17	209
82	Sex by Grade Frequency Count in Percentages on Question 18	210
83	Sex by Grade Frequency Count in Percentages on Question 33	211
84	Sex by Grade Frequency Count in Percentages on Question 35	212
85	Sex by Grade Frequency Count in Percentages on Question 36	213
86	Sex by Grade Frequency Count in Percentages on Question 37	214
87	Sex by Grade Frequency Count in Percentages on Question 38	215

TABLE		PAGE
88	Sex by Grade Frequency Count in Percentages on Question 39	216
89	Sex by Grade Frequency Count in Percentages on Question 40	217
90	Sex by Grade Frequency Count in Percentages on Question 41	218
91	Sex by Grade Frequency Count in Percentages on Question 42	219
92	Sex by Grade Frequency Count in Percentages on Question 43	220
93	Sex by Grade Frequency Count in Percentages on Question 44	221
94	Sex by Grade Frequency Count in Percentages on Question 45	222
95	Sex by Grade Frequency Count in Percentages on Question 46	223
96	Sex by Grade Frequency Count in Percentages on Question 47	224
97	Sex by Grade Frequency Count in Percentages on Question 49	225
98	Sex by Grade Frequency Count in Percentages on Question 50	226
99	Sex by Grade Frequency Count in Percentages on Question 51	227

TABLE PAGE

100 Ranking and Grouping of Students on Word-Completion Balance Measure 228

101 Ranking and Grouping of Students on Word-Association Balance Measure 229

102 Ranking and Grouping of Students on Socioeconomic Scale 230

CHAPTER I

THE PROBLEM

I. INTRODUCTION

On the Canadian scene, political, social and economic factors have played a major role in stimulating and fostering increased interest in bilingualism and biculturalism. Since the publication of the Report of the Royal Commission on Bilingualism and Biculturalism (1965-1970), interest in bilingualism in general and in bilingual education in particular has increased. Many expectations are being voiced for bilingual education from all quarters of the educational world - from the university level to the local school board level. The Worth Commission Report, officially known as Report of the Commission on Educational Planning (Worth, 1972), points out new reasons that support and promote second language learning in Alberta: the retention of cultural diversity and the opportunity to grasp and understand reality through a different verbal medium.

> If we really believe that the retention of diversity is important in the mass culture of the future, then the fostering of other language learning will be a major task for educators and society. Quite aside from the unquestioned usefulness of learning another language, this accomplishment also has deep personal meaning. It has been said that he who knows no other language has never really learned his own. Effective language learning results in a broadening experience for the individual by providing him with the means of viewing his world from a different perspective. He gets this perspective by entering into the culture of other people, through knowledge of their language (Worth, 1972, p.188).

Bilingual education has been under the purview of teachers of second languages, educators and psychologists for many years. Vast waves of mainly European immigration sweeping over the North American continent in the early years of this century rekindled interest in this area of human learning. Survival and success for these people often rested on their ability to learn English or French as quickly as possible. Concerns and questions dealing with bilingual education would be raised among these people and those university-bound Canadian high school students who were obliged to study a second language.

The following issues have been raised at one time or another:

- Does the learning of a second language hinder or improve a person's cognitive ability?

- How do we deal with the problem of interference when teaching and/or learning a second language?

- Why do some people learn a second language more quickly and easily than others?

- What pedagogical procedures are the most effective in the teaching of a second language?

- Do students enrolled in a bilingual program achieve the same level of content mastery as their monolingually-instructed counterpart?

Answers to these questions and many others opened new avenues towards the understanding of factors important for bilingual education. But the answers always remained incomplete. There was still one facet of bilingual education that had to be considered if one

wanted to give a fuller account of the various dynamics at play in second language learning. This facet was student attitude and motivation. Dunkel (1948) was among the first to emphasize the role and importance that motivation plays in learning a second language. In the late fifties, motivation in second language learning once again gained the intellectual spotlight thanks to the work and research of Wallace Lambert and his colleagues at McGill University (Gardner and Lambert, 1959).

Thus the theme of student interest and motivation in second languages has become a recurrent one in pedagogical discussion. The usual approach taken is a consideration of means by which student interests and motivation can be aroused; yet what seems to be needed are more reliable and current data as to what student motivation and interest actually are. No such data have been gathered in any of Edmonton's bilingual schools. It is toward the evaluation of actual motivating forces that the author of this study wishes to make a modest and admittedly imperfect contribution.

II. NEED FOR THE STUDY

> In order to educate the bilingual child successfully, we need to know more than we know at present. Yet this moment of our history demands that we educate him successfully while in the process learning to do so. We need to educate him for a world with which we are not acquainted - the intellectually and emotionally expanding world of the future (Andersson, 1965, p. 165).

Even though these words were written ten years ago, they remain very relevant to the Edmonton situation. Indeed, if those

responsible for bilingual education in the seventies are to educate successfully, it is imperative that they gain a better understanding and appreciation of the motivations for second language learning present in their school and in their community.

Bilingual education in which French was, at least in part, the medium of instruction, has been a component of the Edmonton educational scene for over one hundred years. It began with the establishment of private denominational schools by Catholic religious orders, the Grey Nun Sisters and the Oblate Fathers mainly. These priests and nuns ministered to the various needs of their flock gathered in numerous settlements throughout central and northern Alberta. Many of these settlements traced their origin to the French-speaking employees of the North West Company and the Hudson Bay Company. Others were due to colonization from Quebec and to repatriation of French-Canadians from the eastern American states (Sissons, 1916). To these settlers would the rudiments of faith, reading and writing be dispensed in French (Sissons, 1916, p. 160). Before 1905, Alberta was part of the North West Territories. The ordinance of 1880 states:

> It shall be incumbent upon the trustees of all schools, organized under this Ordinance, to cause a primary course of English to be taught. (Revised ordinances of the North West Territories, Section 82, (1))

Four years later, the ordinance was revised to guarantee the right to use French as a medium of instruction.

> It shall be permissible for the trustees of any school to cause a primary course to be taught in the French language. (School Ordinance of the North West Territories, Section 83 (1))

When Alberta became a province in 1905, it retained in its school act provisions for the teaching of French similar to those contained in the ordinance of 1892. French was allowed as the medium of instruction for one hour a day (Sisson, 1916, p. 170).

In 1964, the status and the role of French as a language of instruction was enhanced by an amendment to the Alberta School Act. French could henceforth be used as the medium of instruction in grades one and two provided that English was taught for one hour a day. French could be used as the medium of instruction for fifty percent of the school day from grades three to twelve. Edmonton's three bilingual elementary schools, Grandin, Our Lady of Lourdes, St. Thomas Aquinas, and its only bilingual junior-senior high school, Ecole J.H. Picard School, have taken advantage of the 1970 legislation. Much time and effort have been generously expended by the staff and administrators of these schools to ensure constant upgrading of both the content and the process of bilingual education. However if these efforts are to bring about the desired results, their implementation must take account of the students' attitudes and motivation to the learning of French. This accounting can no longer rest exclusively on attitudes and motivations that may have been present and operative in the past. Many changes have since occured on the social, cultural and educational scene, as is well illustrated and explained by Gulutsan (1974):

> Even the children of the French community, in spite of the development of French-English bilingual schools and the official and tangible support from Ottawa, are not spared the difficulties associated with language and culture

> retention. They share the problems that characterize the life of their age mates in other bilingual settings who have not yet reached the comfortable Nirvana of English unilingualism (Gulutsan, 1974, p. 159).

The influence and extent of these changes on the present students' attitudes and motivation in the Edmonton area has never been determined. This is why the investigator proposes to conduct research in this important area of bilingual education.

Research has been previously conducted among Edmonton's students attending bilingual schools. Olson (1962) studied the effects of a foreign language background on selected intelligence tests with a view to identifying instruments which provide a valid estimate of the general intellectual ability of children with a foreign language background. Three years later, Brosseau (1965) attempted to identify the predisposing factors which influence second language learning in pre-school children. The comparison of the development of linear measurement concepts in bilingual and monolingual children in Edmonton was studied by Liedtke (1968). However, the domain of attitudes and motivation in French-English bilingual contexts remained unexplored. Such research on French-Canadian bilingual students is missing not only on the local level but also throughout Canada. Admittedly, recent studies (Feenstra, 1967; Feenstra and Gardner, 1968; Gardner, 1960, 1966; Gardner and Lambert, 1959, 1972; Lambert, 1963; Lambert, Gardner, Olton & Tunstall, 1962; Lambert, Gardner, Barik & Tunstall, 1963) have investigated the attitudinal and motivational factors related to second language learning. The subjects who participated in their investigations in Quebec and in Ontario were all English-speaking

however. Gardner and Lambert (1972) did conduct investigations among students coming from French-speaking homes in Maine and in Louisiana. However, in Canada, this is the first time that such an investigation has been undertaken.

The research undertaken for this dissertation attempts not only to satisfy theoretical considerations or to display academic "window dressing". Many practical elements dictate the necessity and the value of such research. Bilingual education has changed considerably in Edmonton. The major locus of this change has been in the student population. Students receiving a bilingual education from one of the city's four bilingual schools no longer come only from French-Canadian homes. A growing number of these students come from families where French is not spoken or from families where only one of the parents speaks French. Furthermore, coming from a French-Canadian family is not necessarily a guarantee that French is spoken in the home. In a masters thesis submitted to the University of Alberta, Alain J. Nogue investigated the parent expectations with respect to Edmonton's bilingual schools (Nogue, 1973). Two hundred and sixty four of the two hundred and ninety seven parents surveyed answered the questionnaire. One of the questions dealt with the amount of French spoken in the home.

> Of the 264 parents participating in the study, 101 or 38.3% indicated that French was always the language of communication in the home, 84 or 31.8% indicated that French was spoken more than 50% of the time, 77 or 29.1% claimed that French was used less than 50% of the time and 2 or 0.8% stated that French was never used (Nogue, 1973, p. 36).

It must be remembered that all the parents participating in this research could speak French !

Contact or lack of contact with the French-Canadian community contributes to the formation of attitudes in the students. In 1975, how does this contact occur? For many students, the school, the classroom, are the only time and place they come most in contact with the French fact. But can we expect the school to replace the community?

In years past, for better or for worse, language and religion were tightly interwoven in Edmonton's French-Canadian community. The French parishes served as the focal point and support of many activities and organizations whereby young and old could renew and strengthen their cultural ties. At the present time, the parishes and the clergy are no longer able or willing to fulfill this role by themselves.

Until the early sixties, orders of nuns and priests operated private schools in our city. Girls attended the Couvent de l'Assomption where instruction was given from the grade one to the grade twelve levels. Collège Saint-Jean served the male student population from grade 8 to the final year of the Bachelor of Arts degree. These two educational institutions sustained and promoted the French-Canadian culture and heritage for many years, serving students from both Edmonton and the rural areas. The decline in both the demand and popularity of private boarding schools and the increasing involvement of the publicly funded schools in bilingual education prompted these institutions to amalgamate with the Edmonton Catholic School System.

The process of urbanization has left its mark on the vitality

of Edmonton's French-Canadian community. French-Canadian families are now spread out across the city whereas in the past they were grouped around Edmonton's four French parishes. Also, religion does not exercise the same influence and appeal it once enjoyed. The moral dictum "Qui perd sa langue, perd sa foi," [1.] often heard from pulpits in years past has become an anachronism. Students who attend church only to keep peace at home or to perfunctorily fulfill a religious obligation, can too often and too easily be negatively reinforced through this pairing of language and religion.

How have these changes influenced today's student relative to the learning and to the use of the French language? Edmonton boasts a French radio station, a French television channel and a weekly French newspaper. Has the presence of these media helped foster in today's student a more positive and enthusiastic attitude to the study of the French language? What status does the French language have in the eyes of the students? Are we possibly faced with the task of changing attitudes within the student population attending bilingual schools? Gardner and Lambert (1972) have shown that a young person's attitudes toward his own linguistic group and the English culture around him influence his progress in learning and mastering both English and French. If attitude and motivation play such a crucial role in second language learning according to Gardner's and Lambert's findings (1972), what must be done to foster those attitudes conducive to the attainment of bilingual education's goals?

Only through research that addresses itself to the study of

attitudinal and motivational factors present in our community may we hope to have these questions answered. Once the answers are known, they must seriously be taken into account in the development of curricula and teaching strategies. The answers to these questions must also contribute to the establishment of realistic goals for Edmonton's bilingual schools. It is hoped that the present research will be a first step on the journey to find these answers.

PURPOSE OF THE STUDY

The purpose of the study is to discover and describe the attitudes and motivation of the students presently attending Ecole J.H. Picard School, Edmonton, Alberta, relative to bilingualism and biculturalism, or more precisely, towards the study of French and the use of the French language as a medium of instruction for courses other than French. Thus the investigator wants the students to give us the answers to such questions:

1) Why are you attending Ecole J.H. Picard School?
2) What value and importance do you attach to bilingual education?
3) How do you approach the learning of the French language:
   - with enthusiasm?
   - with resistance?
   - with passive submission to parental wishes?
   - with a blasé attitude because only English is considered necessary to get ahead academically and voca-

tionally?

More specifically, the investigator hopes the present research will shed some light on the answers to the following questions:

1) Support for the integrative/instrumental types of orientation was found mainly in Montreal (Gardner, 1966; Gardner and Lambert, 1959) and in three American settings: Louisiana, Maine and Connecticut, (Gardner and Lambert, 1972). In Montreal there exists much environmental support for the study of both French and English, unlike Edmonton or the three American settings where Gardner and Lambert conducted research in the early sixties. Will research here reveal the same results as that conducted in the United States? The investigator therefore wants to test in a Western Canadian setting the generalizability of these notions about the language learning process as set forth by both Lambert and Gardner.

2) Are there significant differences regarding attitude and motivation toward the study and the use of French related to:

a) the grade level of the students;

b) the sex of the students;

c) the socioeconomic status of the parents;

d) the possibility the student may have resided for at least six months in a predominantly French-speaking community;

e) the knowledge of a third language by a student;

f) the student's level of bilingualism as measured by

a linguistic balance test.

DEFINITION OF TERMS

Attitude

The definition used shall be that proposed by Charles A. Heidenreich (1970, p. 15):

> . . . an orientation toward or away from some object, concept, or situation. A readiness to respond in a predetermined manner to an object, concept, or situation.

Motivation

Motivation will refer to those factors "which increase and decrease the vigor of an individual's activity. It determines the levels or degree of his activity" (De Cecco, 1968, p. 132).

Bilingualism

By bilingualism, the investigator will refer to the knowledge and use of two languages by the same person. A bilingual person is one who understands two languages even though he may speak one language more fluently than the other.

Bilingual Education

The definition used shall be that found in the Draft Guidelines to the Bilingual Education Program, under Title VII of the Elementary and Secondary Education Act of 1965, as amended in 1967.

> Bilingual education is the instruction in two languages and the use of the two languages as mediums of instruction for any part or all of the school curriculum. Study of the history and culture associated with a student's mother tongue is considered an integral part of bilingual education.

DESIGN OF THE STUDY

The population consists of 606 students currently attending Ecole J.H. Picard School in Edmonton, Alberta. This school is a junior-senior high school. Its students consequently range from grade seven to grade twelve.

The questionnaire is made up of seventy items divided into seven categories. These categories are:

1) Student personal information.

2) Student perceived achievement in French.

3) Student satisfaction with the French program.

4) Student instrumental orientation to the study of French.

5) Student integrative orientation to the study of French.

6) Student attitudes and motivation.

7) Parental-family encouragement and influence.

A measure of the students' degree of bilingualism will also be included. To assess the degree of bilingualism of the students, two measures identical to those used by Gardner and Lambert (1972, pp. 61-62) were used: "word completion" and "word association".

ASSUMPTIONS

For the purpose of this study, it is assumed that:

1) Student attitudes and motivation to the study of French can be measured by paper-and-pencil multiple-choice format items.

2) The questionnaire used for this study possesses the degree

of validity and reliability necessary.

3) The subjects are able to understand the items in the questionnaire.

DELIMITATIONS

The present study is delimited in the following ways:

1) A most vexing fact about student motivation is that it cannot easily be measured. A further complication of motivation is that it is subject to change within a fairly brief period of time. The student may enter a language course without any particular interest. Yet, as we all know, he can become interested in a short period of time, or unfortunately, equally disinterested. Thus motivation cannot be assumed to be as relatively constant as other characteristics of the students.

2) The subjects of this study are enrolled in grades seven to twelve. Students' attitudes and motivation present at the elementary and post-secondary levels might be different as a result of any number of factors. The results of this study are therefore not generalizable to other age groups.

3) This study is limited to only one school since Ecole J.H. Picard School is the only bilingual junior-senior high school in Edmonton. All its students presently reside in Edmonton or in its suburbs. Consequently they have access to many opportunities to better acquaint themselves with French-Canadian social and/or cultural activities: French television and radio, Le Théâtre Français,

La Cabane à Sucre [2.] and many more events and happenings of a French nature. Such opportunities are not necessarily common to other Alberta communities where bilingual junior-senior high schools may be found. Therefore the results of this study cannot be generalized beyond the population involved in this study.

4) The results of this study may have been different had the questionnaire been administered at the beginning or at the end of the school year. The present questionnaire was given slightly past the mid-point of the 1974-1975 school year.

5) The results of this study may have been different had students who left Ecole J.H. Picard School since September 1975 been included in the population. When the questionnaire was administered, twenty-four students had withdrawn from the school during the current school year. Fourteen of these students transferred to another school. The remainder left school because of a combination of personal-academic-financial difficulties.

LIMITATIONS

In this study the following limitations must be recognized:

1) Paper-and-pencil measures are not the best means of ascertaining the type and strength of attitudes in people. Observation of their overt behavior could be the most reliable method. However the amount of time and the number of "observers" that such a procedure requires would be prohibitive. In reference to the fallibility of attitude questionnaires, Osgood, Suci and Tannenbaum (1957, p. 198)

state: "One of the most common criticisms of attitude scales of all types is that they do not allow us to predict actual behavior in real-life situations."

2) The investigator is well known to all the students participating in this study since he has been the school guidance counsellor since the fall of 1972 when the school opened its doors for the first time. It is impossible for the investigator to determine the effect this may have on the students' responses. Confidentiality has always been a hallmark of the work of a counsellor. It is thereby hoped that the students will have answered honestly and not attempt to give answers which according to them the investigator seemed to be seeking.

CHAPTER II

RESEARCH AND THEORY

The second chapter is divided into two sections. The first section deals with the related theory underlining this present study. The second section presents an overview and analysis of the research that has been conducted in Canada and abroad relative to the role of attitudes and motivation in second-language learning.

THEORY

A problem that has perplexed educators for so many years is: Why do some people learn a foreign language quickly and well while others under the same circumstances do not? The search for an answer to this question gave rise to the field of prognosis testing, i.e. of attempting to predict who could succeed in the study of a second language. As a result, various foreign-language aptitude tests were developed. Henmon (1929) gives us an excellent account of aptitude tests in use then and of the rationale underlying their creation and development. It was then assumed that the variability of success and oral mastery found among foreign language learners was based on some fundamental language learning aptitude. Prognostic testing was further advanced and developed through the work and research of Wittenborn and Larsen (1944) and of Carroll (1954, 1955, 1956).

Nevertheless, a person's intellectual capacity and his measured

aptitude for language study were still inadequate of and by themselves to give a full accounting of foreign language study. Despite the refinements that had been brought to the development of foreign language aptitude measurements, their ability to predict second language achievement was still imperfect (Carroll 1954, 1956).

Other questions were still being raised about the role of aptitude in foreign language study. Was this aptitude hereditary or simply molded by an individual's interaction with his environment? Or was aptitude simply an "ear" for languages? We all have an ear for languages since we readily take for granted everyone's ability to learn at least one language. If we have the "ear" to learn our mother tongue, do some of us mysteriously lose this ability when attempting to master another language? If aptitude fails in accounting totally for the variation of success in students learning a second language, maybe the different teaching methods should be considered as the possible cause or source of this variation? However, no matter the method used, some students develop second language skills to a rather high level of competency.

Could there be another factor that had to be considered in addition to language learning aptitude in order to be able to better predict those who would do well in second languages? Might it not be profitable to consider the "personal" characteristics of the learner; his interests, his motivation, his attitudes, his willingness to do the required work?

Dunkel (1948) emphasized the necessity to consider motivation as an important factor in language learning. In 1948, few if any

adequate data were available on the motivation of either high school or college students (Dunkel, 1948, p. 11). This is not to say that until then teachers of second languages did not recognize the importance of motivation. Any observer of the human situation would readily admit the importance and contribution that effort and interest bring to the accomplishment of any task. But motivation and attitude as applied to second language learning had not yet been thoroughly examined and now required closer scrutiny and description. Only then would we be able to speak with more clarity and assurance of the contribution attitudes and motivation make to the second language learning process. Only then would we know if the importance given to these two factors, attitude and motivation, had been overplayed or undervalued. Could it be that motivation and attitude made no significant difference?

Motivation and attitude do make a difference. This conviction does not rest on hunches or intuition. Dunkel (1948) had alerted the academic world to this facet of second language learning. Gardner and Lambert (1959) of McGill University would give scientific sanction to the role and importance motivation and attitude play in learning another language. They showed that not one but two independent factors were crucial in second language learning: intelligence and aptitude on the one hand, and a complex of motivation and attitudes vis-à-vis the people and culture represented by the second language on the other (Gardner and Lambert, 1959). This particular finding finds its theoretical foundation in the work of Mowrer (1950) who proposed the concept of "identification" in dealing with language

learning and other habits that develop in people or animals. Mowrer describes how the young child begins to imitate the verbal symbols of his parents since imitation has provided the child with positive reinforcement such as attention and the satisfaction of basic biological needs. As the child grows and becomes more proficient in his speech patterns, speaking becomes reinforcing in itself. The child strives to perfect his ability to speak in order to gain greater reward and satisfaction. This desire to imitate his parents even in their absence is what Mowrer understands by the concept "identification".

Susan Ervin (1954) applied this concept of "identification" to the bilingual person. The bilingual person will attempt to achieve mastery of a second language in order to imitate the behaviour patterns of another socio-linguistic grcup. Ervin also suggests that language learning is not only dependent on identification but points out that imitation and reproduction of sounds can have a utilitarian value for the person. "In addition to the secondary reward experienced in the absence of the model (i.e. identification), there are various direct rewards given by others when behaviour imitative of adults has occured" (Ervin, 1954, p. 2).

This is how Gardner and Lambert explain their understanding of "identification":

> We reasoned that some process like identification, extended to a whole ethnolinguistic community and coupled with an inquisitiveness and sincere interest in the other group, must underlie the long-term motivation needed to master a second language. Other motivations such as a need for achievement or a fear of failure seem appropriate for short-term goals such as passing a language course, but seem insufficient to account for the persistence needed in the

> laborious and time-consuming task of developing real competence in a new language (Gardner and Lambert, 1972, p. 12).

Thus learning a second language can fulfil two different types of purposes. For some it may be a desire to become integrated into a different socio-cultural group, either because of their interest for this group, or because of their dissatisfaction with their original group (Lambert, 1955). This latter phenomenon is sometimes observed in newly-arrived immigrants who in order to increase their chances for socio-economic survival break all ties with their former socio-cultural heritage. Others may wish to learn a second language for the purpose of obtaining a broader education, or increasing their employment or earning opportunities, or any other utilitarian motive. Whyte and Holmberg (1956) relate the experiences of American workers in Latin America. These workers learned Spanish as quickly as possible in order to expedite the completion of the work. They observed that those Americans who most quickly gained fluency in Spanish were those who thought that they shared the physical attributes of Latin Americans and who were willing to socialize with the native people.

> . . . an individual successfully acquiring a second language gradually adopts various aspects of behaviour which characterize members of another linguistic-cultural group. The learner's ethnocentric tendencies and his attitudes toward the other group are believed to determine his success in learning the new language. His motivation to learn is thought to be determined by his attitudes and by his orientation toward learning a second language (Lambert, 1972, p. 180).

Thus success in a second language implies more than the mastery of a new set of verbal habits. It encompasses a willingness to be like representative members of the other language community

and to participate at least vicariously, in the life and activities of that community. A person learning a second language for the above-mentioned purpose displays what Lambert describes as an "integrative motive" (Gardner and Lambert, 1959).

However should the student attempt to master a second language in order to gain social recognition, financial rewards or better employment opportunities, he is then displaying a contrasting form of orientation called "instrumental". The second language is now studied for its utilitarian value and not as a means to learn more about another cultural community and become one of its potential members.

Lambert has thus well differentiated the goals a student will be seeking when learning a second language. A measure of these two types of orientation is included in the questionnaire (see Appendix A). Part IV-A of the questionnaire deals with instrumental orientation while Part IV-B deals with integrative orientation. Once we learn why a person wants to learn another language, it is also important to know what efforts he is ready and willing to make in order to reach his goal of learning a second language. Part V of the questionnaire attempts to measure the students' motivational intensity.

RELATED RESEARCH

Jones (1949, 1950) is regarded as one of the pioneer investigators in the area of attitudes and motivation to second languages. Investigating attitudes toward Welsh as a second language among

teen-age students, Jones discovered that after the first year of Welsh classes, student interest waned, especially among the boys. Utilitarian goals provided the main rationale for the study of Welsh. However, home background and influence were shown to be significant factors.

In the late fifties Lambert and Gardner, psychologists at McGill University, began to investigate the various factors related to second language learning, and more precisely to determine the relative importance of both language aptitude and motivation. Seventy-five grade 11 students who had already completed approximately seven years of training in French took part in this first study of many undertaken by Gardner and Lambert. The results indicated that second language achievement was related to two factors: linguistic aptitude and motivation.

> The important result is that two factors, not one as previously presumed, are associated with second language achievement. Furthermore, the variables constituting the "new" factor have an empirical as well as a theoretical basis. The significant positive correlation between the orientation index and achievement in French indicates that the integratively-oriented students are generally more successful in acquiring French than those who are instrumentally-oriented students (Gardner and Lambert, 1959, p. 271).

In his doctoral thesis, Gardner (1960) showed that the French skills stressed in the classroom appeared to be more highly dependent upon language aptitude than upon a desire to learn the language in order to become a more integral part of the French-Canadian community. However the language skills, especially those dealing with oral competence, which are developed and strenghthened mainly outside the school situation appeared more related to an integrative motive. This study was also among the first to illustrate the

direct relationship that exists between parents' and their children's attitudes and motivation. However it would have been interesting if Gardner could have studied more closely the pedagogy being used in the classroom. His findings told of a close relationship between student attitudes and the type of skill development stressed in the classroom. How different would these students' attitudes have been had they been involved in a mainly oral-aural approach to second language teaching? Such a comparison would have to wait twelve years (Smythe, Stennet & Feenstra, 1972).

Further confirmation that intellectual capacity and attitudinal orientation affect success in second language learning was borne out in a study by Anisfeld and Lambert (1961) with Jewish high school students studying Hebrew at parochial schools in Montreal. An interesting finding was the relationship between socioeconomic status and student attitude. Why this variable is not more often taken into account is not explained by the researchers. It is included in the present study.

In their milestone study, The relation of bilingualism to intelligence, Peal and Lambert (1962) found that bilingual children nurture more favorable attitudes towards both French and English communities than do monolingual children. Moreover, the parents of bilingual children also share this same sympathetic attitude toward both linguistic-cultural groups while parents of monolingual children do not. This underscores the important influence that parental attitudes can exercise on children, as previously shown by Jones (1949 , 1950).

A study conducted by Lambert and other researchers (Lambert, Gardner, Barik & Tunstall, 1963) expanded the findings of the previous studies. Students attending the McGill French Summer School were chosen. Those students at the introductory level of the program who achieved well displayed favorable attitudes toward France and a willingness to identify with the French people. However with the advanced students, who were mainly secondary school language teachers, attitudinal variables showed no distinct relation to French achievement. This study also provided an excellent example of "anomie", of social uneasiness. As the advanced students progressively become so proficient that they were even dreaming in French, their feelings of social upset increased. To minimize these feelings, they reverted, at times, to speaking in English thereby breaking their pledge to speak only French for the six-week period.

Gardner (1966) showed that whereas motivational variables are important for achievement in a second language, the nature of the motivational component will differ as a function of a number of other variables. The most important variable is the opportunity to interact with the linguistic-cultural community whose language is being studied. The necessity for a certain type of interaction was not stressed by Gardner. Do the students have to interact face-to-face with a French speaking community to promote those attitudes conducive to second language learning? Or can this contact be effected vicariously through the different media? In other words, for our young people who have already passed more time in front of the television set than any previous generation, is it more effective

to attend a French play presented by a local drama group or to watch a drama production of Radio-Canada? We are living in an electronic world. The influence this new world may exercise in the development of specific attitudes to second language learning has not yet been adequately studied.

The first confirmation in Ontario of Lambert's and Gardner's findings occured in 1968. Feenstra and Gardner (1968) investigated student attitudes among grade nine pupils. Their findings replicated those previously obtained in Montreal. They too revealed the important role that attitudes play in the degree of mastery achieved in a second language. Here too it was found that a positive relationship exists between parents' ethnocentric attitudes and those of their children.

Does the type of instructional programme used in the classroom affect the attitudinal outlook of the students? Smythe, Stennett and Feenstra (1972) studied the relationships among aptitude, attitude and type of course with a group of grade ten students. One group of students had received a traditional type of instruction emphasizing the study of grammar and written vocabulary. The second group was involved in an audio-lingual approach. This study also lent support to the contention that both aptitudes and attitudes are implicated in second language learning. The two different kinds of classroom approaches resulted in the development of different patterns of skills, as one would expect. However it does seem that different pedagogical approaches do not exercise a differential effect upon the students' motivation.

Gardner and Lambert (1959, 1960) had found support in Montreal settings for the integrative-instrumental distinction. Do these types of orientation also play a role in other settings? How generalizable were the results obtained in the Montreal studies? The answers to these questions were sought in the Louisiana, Maine and Connecticut studies (Lambert, Gardner, Olton & Tunstall, 1962; Gardner and Lambert, 1972).

Lafayette Parish in Louisiana was the first of two American bicultural settings that served for Gardner's and Lambert's investigations. Ninety six grade IV and V students participated in the study.

The results of this study supported Lambert's finding that second language learning rests upon two independent factors: intelligence and motivation. Competence in French grammar, vocabulary and reading were found to be directly related to intellectual capacity. However factor analysis indicated that motivation and a desire to learn French were associated with a high level of achievement in French course work.

> This pattern indicated that achievement in these school taught features of French depend not only upon intelligence (Factor I), but also - and quite independent of intelligence - upon a motivation and desire to learn the language. Thus, regardless of intelligence, the motivated student with encouragement from his family can do well in school-taught French (Lambert and Gardner, 1972, p. 36).

Here again family encouragement plays a determining role. Lambert had asked the students to what extent their parents encouraged them to study French. It would be useful to know what form of parental encouragement is most effective. If the task of motivating students is a difficult one for the classroom teacher, it is, by no means,

necessarily easier for the parents. How can parents best cooperate with the school in fostering in the students a sincere desire to achieve bilingualism?

The investigator esteems parental influence and encouragement to be an important factor. Items 68, 69 and 70 of the questionnaire (see Appendix A) deal with these concerns raised by Lambert and Gardner. However, they also consider important the amount of French that is used in the home. That encouragement plays an important role, no one can deny. However, it is also important to determine the extent to which French is used at home. Possibly one of the best forms of encouragement is example. French-speaking parents who encourage their children to learn French but allow an English atmosphere to permeate most of the home life offer hollow encouragement in the estimation of the investigator. It is to an estimation of this parental-family role and example that items 52 to 67 of the questionnaire (see Appendix A) address themselves.

One hundred forty five high school students participated in the Maine study conducted in 1960-61 (Lambert et al., 1962). This study revealed that students with a strong motivation and interest to learn French succeeded in their French course, independently of their measured intellectual abilities. The main source of this motivation appeared to lie in the students' favourable view of their French teacher and a sensitivity for the feelings of others. Intellectual aptitude was related to school grades in French but not to any other measures of French achievement such as phonetic accuracy, linking and free speech. Finally, the students' main

orientation was instrumental - students showed sensitivity mainly to the practical value of second language learning even though they lived in communities that provided them many opportunities to become integral members of French socio-cultural groups.

Hartford, Connecticut was the locale for the third American study. Unlike the Louisiana and Maine settings, this urban locale afforded the students less opportunity for direct and numerous contact with French-Americans.

In this study, an intelligence-aptitude factor was found to be related to French grades and achievement in reading, vocabulary and grammar. However, student motivation and a desire to learn French also contributed to a student's level of attainment in the study of French.

Contrary to the Louisiana and Maine studies, the motivation of the students participating in this study appeared to be based on an integrative orientation toward the French people and their culture, that is, an interest in adopting French modes of thought and behaviour while learning the language.

That attitudes and motivation - quite independently from intelligence and language aptitude - play a determining role in the development and acquisition of a second language is borne out by these three studies. Students who had obtained a high standing on both intelligence and aptitude measures were not necessarily the ones who exhibited the most favorable attitudes and strongest motivation. Attitudinal-motivational factors are shown to be independent of intelligence-aptitude factors in these three studies.

This is not to say that the same variables exercised an identical influence in all three communities. Each setting had its own distinct network of interrelated variables.

Franco-American students (students who have had the opportunity to learn to speak French from their parents and siblings) participated in the Louisiana and Maine studies. How did they approach the learning of their own language at school? The answer to this question is of utmost importance to the investigator's present research since these two studies represent the near totality of investigations undertaken among members of a French linguistic minority group, which also characterizes the student population of Ecole J.H. Picard School.

The eighty Louisiana students who participated in the study (Lambert et al., 1962) had only 1.05 years of French instruction. The individual differences that were observed in this study can be attributed to aptitude and motivation. Language aptitude determined a student's performance in comprehension, vocabulary and reading while motivation contributed to the subjective perception of being competent in French and to above average performances in French grammar.

Among the many results obtained from this study, one merits special mention. There was a discrepancy between the male and female students with respect to language proficiency and identification with the American culture. The boys seemed more at ease in thinking and speaking in French while preferring the American to the French culture. The results for the female students were the exact opposite.

They manifested a preference for the French over the American culture while preferring to think and speak in English. It is unfortunate that investigations were not also conducted into the perception these Franco-American students have of French-Canadian culture. French is a language not only spoken in France. Could it not be that some of these students might have indicated a closer affinity and deeper interest for French-Canadian culture in opposition to French culture?

The Maine Franco-American study (Lambert et al., 1962) brought to light factors that restrict the potential of the Franco-American student. Firstly, a preference to use the French language does not necessarily result in better competence in that language. Neither does a strong motivation to learn the language necessarily promote language proficiency. The efficient approach is to be found among students with a determined instrumental orientation toward French study accompanied by strong parental support.

> . . . a family-shared realization of the potential utility of French study seems to provide a comfortable adjustement to an otherwise disruptive cultural dilemma. Of all the various approaches that are attempted by these students, this one emerges as the most hopeful and encouraging. Compared to overplaying their Frenchness on the one hand or their Americanness on the other, both of which seem to be personally unsatisfactory, the family-supported instrumental approach seems to be much more than a simple compromise solution. Instead it provides a genuine opportunity to become both French and American (Gardner and Lambert, 1972, p. 79).

In all these studies, most of the students are at the high school or university level. Very little research has been done among junior high students. Gardner and Smythe (1974) conducted a study on the integrative motive in second language acquisition among grade

7 to 11 students. Since Jones' studies (1949, 1950), little attention had been paid to students at the lower junior-high levels. Gardner and Smythe wanted to discover why students at different grade levels dropped out of the second language program. They observed that those students categorized as integratively oriented tended to remain in the program.

We have thus seen that in various settings, with various students and different types of second language courses, a common denominator is present. There exists a relationship among linguistic ability measures, degree of second language achievement and a complex of attitudinal and motivational variables. Learning a second language does not consist solely in acquiring a new linguistic code. The second language learner knowingly or unknowingly adopts an orientation, instrumental and/or integrative, to the study and the use of the language being learned. Different settings will reveal differences in the relative effects of instrumental and integrative orientation upon the students' achievement, and in the role and influence played by the student's parents and family. It is to the description of the motivational factors present among the students attending Ecole J.H. Picard School that this study attempts to address itself.

CHAPTER III

DESIGN OF THE STUDY

The purpose of this chapter is to present the design of the study. It includes the description of the questionnaire, the setting and the population, the measures of bilingual balance, the gathering and treatment of the data.

THE QUESTIONNAIRE

The questionnaire that has been developed for this study is composed of seventy items divided into seven parts. It is included in Appendix A.

Part I

The first five items deal with personal information about the students. Besides indicating their sex and grade, the students were asked if they knew a third language well enough to maintain a casual conversation. Approximately five per cent of the student population attending Ecole J.H. Picard School are of non-Francophone or non-Anglophone ancestry. They come from homes where Ukrainian, German, Italian, Hungarian and Portugues are the maternal language. Do these students as a group display sets of attitudes and motivations which distinguish them from the other students? The fourth

item dealing with personal information inquired if the student had resided in a French community for a period of at least six months. During the administration of the questionnaire, the investigator advised the students that in Alberta, only certain towns and villages in the Peace River district such as Falher could qualify as French-speaking communities. A second restriction explained to the respondants dealt with their age when they lived in such communities. Students had to have been of school age while living in a French community in order to answer the fourth question affirmatively.

Finally, the students were asked to state their father's occupation. If their father was deceased or not able to work, they were to state their mother's occupation. Blishen's socioeconomic index for occupations in Canada (Blishen, Jones, Naegele & Porter, 1968, pp. 741-753) was used for classification purposes. The scale was divided into nine equal categories according to the socioeconomic index. Appendix C contains the classification categories used for this study. To the investigator's knowledge, this is the first time that indicators of socioeconomic status are included as one of the variables in studying attitudes and motivation in second language learning. The investigations of Gardner and Lambert (1972) in the United States did not take this factor into account. It was included in the present study to verify the often-held assumption that students belonging to high socioeconomic strata of our society will receive greater parental encouragement and stimulus to study a second language. Is this the case in Edmonton? And if so, does it contribute significantly to promoting stronger student moti-

vation in the study of the French language?

Part II

Part II of the questionnaire, items 6 to 10, deals with the students' perception of their achievement in French. They are asked to appraise their ability to speak, understand, read and write French in items 6 to 9. Item 10 asks in which language they are most at ease when speaking. Teacher evaluations were not used because slightly more than 50% of the high school population had begun their French course only three weeks before the questionnaire was administered. Consequently, it was too soon for their instructors to make any reliable judgments of their students' competence in French.

Part III

Part III, items 11 to 18, attempts to measure the students' satisfaction with the French program used presently at the school. This part aims also at measuring the students' satisfaction with the French program as compared to their appreciation of courses taught in English.

Items 11, 12, 13 and 14 deal specifically with various facets of the French program: skill development, class activities, curricular materials and evaluation.

Items 15, 16 and 17 oblige the students to compare their French course to other courses in terms of preference and difficulty.

Item 18 asks students if the amount of time presently devoted

to French should be increased, decreased or left as it is now.

Part IV

Part IV deals with the students' orientation to the study of the French language. It is divided into two sections: Part IV-A, items 19 to 24, consists of statements dealing with an instrumental orientation, i.e. with the intention of learning a language for utilitarian purposes. Items 19 to 22 are identical to those used by Gardner and Lambert in their studies as reported in Gardner and Lambert (1972, p. 148). Items 23 and 24 were added by the investigator.

A desire to gain a deeper insight into the ways and life of French-speaking people and to become participants in their culture is measured by Part IV-B, items 25 to 30. The students' degree of integrative orientation was obtained by their responses to these statements. Items 25 to 28 are those used by Gardner and Lambert (1972, p. 148) while the last two, items 29 and 30 were included by the investigator.

Part V

Part V of the questionnaire deals with the students' expressed attitudes and motivation to the study and use of French. Items 31, 32 and 33 were taken from the Motivational Intensity Scale (Gardner and Lambert, 1972, p. 152) used in the American studies conducted

by Gardner and Lambert. Item 34 was introduced to determine to what extent students do more, less or as much work in French as in any other course. Items 35, 36, 37, 38, 39, 40 and 41 wish to determine in what language(s) students prefer studying various courses.

Item 42 attempts to discover to what extent the students wish they could speak, read and write French very well.

Item 43 is a key item in that it asks the students to identify the main reason for which they attend Ecole J.H. Picard School.

Items 44, 45, 46, 47 and 48 describe different skills that learning a second language can emphasize. The students are asked to indicate how much interest they have in each of these skills.

Items 49, 50 and 51 deal with the amount of time a student spends reading French books and magazines, listening to French radio programs and watching French television programs.

Part VI

To what extent do the students' parents encourage and promote the study and the use of the French language? To what extent is the French language used in the home either as a means of communication among family members or as the verbal medium for reading, listening to the radio and watching television? The purpose of Part VI of the research instrument is to answer these questions.

Items 52, 53, 54, 55, 56, 57 and 58 ask how often French is used as the medium of communication among various family members. Items 59, 60, 61, 62, 63, 64, 65, 66 and 67 aim to determine how

often various members of the family read French newspapers, magazines or books, listen to French radio programs and watch French television programs.

Items 69 and 70 deal with the amount of encouragement parents give their children to study French and with how often parents stress the importance of knowing French now and in future years.

Measures of Bilingual Balance

Two measures of bilingual balance were obtained for each respondent. These measures were used by Gardner and Lambert (1972) in their investigations among French-American students in Maine and Louisiana.

The first measure used was "Word Completion". The students were given four two-letter sequences, each of which occurs commonly at the beginning of words in either French or English. These letter sequences were: LI..., VA..., SU..., TE... . These letter sequences were not presented orally but in writing on the blackboard so as to not prejudice the students answering in one language rather than the other. The students were given 45 seconds to write in English and in French all words they knew beginning with each set of two letters. The students replied on a separate answer sheet.

The second measure is well known as the "Word Association Test". In this exercise, a series of words in both French and English were presented to the students, one word at a time. The students were then asked to write as many words as they could related to the given word in the space of one minute. If the word given was French, all

their responses had to be in French. When an English word was provided, only English words were acceptable. The words used were: MAISON, IDEA, PAUVRE, HOUSE, IDEE, POOR. These words were presented orally by the investigator and then written on the blackboard.

A stop-watch was used to assure that the time given to all groups was identical. The scores on both measures of bilingual balance were arrived at by subtracting the number of French words from the number of English words. To eliminate negative numbers, a constant of thirty was added to each score. Thus, scores above 31 indicated a dominance of English responses, and scores below 29, a dominance of French responses.

Words that were slightly misspelled were accepted. However in the "word completion" exercise, a word whose spelling did not start with one of the two letter sequences was rejected. Also, the students were advised that proper nouns could not be used in the word completion test, words such as Valerie, Susan, Vancouver, etc..

THE PILOT STUDY

A pilot study was conducted at Ecole J.H. Picard School approximately one month before the final questionnaire was administered. The purpose of this pilot study was two-fold: 1) to verify that both the questions and the answers of the questionnaire were comprehensible; 2) to ascertain that the procedures used to administer the questionnaire were simple, complete and clear.

Twenty-eight grade 7 students and twenty-eight grade 8 students participated in the pilot study. Students at this school are not grouped in different classes according to their intellectual ability. Thus each class offered a cross-section of academic ability.

The students were told to raise their hand whenever they met an item that they could not understand while answering the questionnaire. After having completed the questionnaire, the investigator invited the students to give their comments and to offer their suggestions for its improvement.

The results of the pilot study indicated that the format of the study was valid. The students had no difficulty understanding the purpose of the study nor in completing the questionnaire. However they did offer some valuable suggestions that were incorporated in the final draft of the questionnaire.

Here are the main suggestions that were used.

1) Addition of question 10 which asks in which language the student is most at ease when speaking.

2) To facilitate the compilation of the data, the items dealing with instrumental and integrative orientations were separated into two parts: Part IV-A, instrumental orientation, Part IV-B, integrative orientation.

3) In the original questionnaire, Mathematics and Science had been grouped together in order to ascertain which language the students preferred for instruction in these two courses. The majority of students stated that the question should be put separately

for each course. This recommendation was followed in the revised questionnaire.

Other minor changes were introduced in the wording of certain questions and answers. A teacher of English from the school proof-read the questionnaire for both style and suitability to the school population.

DATA COLLECTION

The questionnaire was administered in the first week of March, 1975. Only the investigator administered the instrument to all the students. He met with each of the different classes during a forty minute period. Ten percent of the school population, mainly at the high school level, did not complete the questionnaire because they were not present the day their class was met. No effort was made to have these students answer the questionnaire at a later date since a significant proportion of the student population had already participated. The number of students by sex and grade who participated in the study is given in Table 2, Appendix D.

All students were instructed to answer the questionnaire by blacklining with a pencil on the answer sheet the response chosen for each question. Only for item 5 were the students asked to answer by writing in the upper left-hand section of the answer sheet their father's occupation. If their father was deceased or not living at home due to separation or divorce, they were to state their mother's occupation.

The investigator then transcribed this occupation to one of the nine answer positions for item 5 on the answer sheet. Blishen's socioeconomic index (Blishen et al., 1968) was used to allocate each occupation to one of the nine levels. The cut-off point used for each category is given in Appendix C.

An identification number was assigned to each questionnaire before being distributed to the students. However the answer sheets were distributed randomly to the students in order to prevent any possibility of identifying an answer sheet as belonging to a particular student.

TABULATION OF THE DATA

The completed answer sheets were optically scored in order to transfer the information to IBM cards. In the scoring, numerical values were assigned to the data. The values assigned to the response positions were from zero to eight, depending on the number of responses for each question. The values were reversed for questions 49, 50 and 51.

Total scores for each student were calculated by computer for the following categories:

1) Self-perceived achievement in French (Items 6 to 10)
2) Satisfaction with the French program (Items 11 to 18)
3) Instrumental orientation (Items 19 to 24)
4) Integrative orientation (Items 25 to 30)
5) Student Attitude (Items 31 to 51)

6) Parental-family influence and encouragement (Items 52 to 70)

7) Bilingual Balance Measure I

8) Bilingual Balance Measure II

A tally was made for the following five items:

1) Sex

2) Grade

3) Knowledge of a third language

4) Residency in a French community

5) Socioeconomic status

In order to facilitate and expedite specific statistical treatment of the data, new cards were generated to include the above information.

STATISTICAL TREATMENT OF THE DATA

Existing computer programs from the Division of Educational Research Services at the University of Alberta were used in the analysis of the data. The following analyses were made:

1. The students' answer sheets were scored using the SCORO1 program of the DERS Library. This allowed the compilation of the data into subtests as well as giving the subtest totals, means, variances and standard deviations.

2. To determine if significant differences existed between the means of male and female students of each grade, between the means of bilingual and trilingual students and between the means of

students having lived in a French community and those who have not, the ANOV10 program of the DERS Library was used. This program gives us the "t" values and their probability levels between means of independent samples.

3. Two-way analyses of variance with scores from the six measures of attitudes and motivation as the criterion measures were carried out using the ANOV25 program of the DERS Library. This procedure was used to determine if the means obtained on each measure of attitude and motivation by the students differed significantly. Scheffé's formula for calculating F (Ferguson, 1971, pp. 270-271) was used to obtain multiple comparisons of the means obtained by each group of students on the six measures of attitude and motivation.

4. The NONP10 program of the DERS Library was used to obtain a frequency matrice by sex and grade of student responses to certain items of the questionnaire.

CHAPTER IV

DISCUSSION OF THE RESULTS

The aim of this study is to describe the attitudes and motivation to the study and use of the French language of a particular group of junior-senior high school students attending Ecole J.H. Picard School in Edmonton, Canada. In addition, this study attempts to discover if the following factors are significant determinants of these students' attitudes and motivation: 1) sex, 2) grade level, 3) knowledge of a third language, 4) residence in a French community, 5) socioeconomic status of the student's family, 6) student's ranking on two measures of bilingual balance: the "word-completion test" and the "word-association test" (Gardner and Lambert, 1972, pp. 161-162).

In all the analyses, results are presented for the following six measures of attitude and motivation:

1) Students self-perception of achievement in French - Items 6 to 10 of the questionnaire.
2) Student satisfaction with the French program - Items 11 to 18 of the questionnaire.
3) Instrumental orientation of the student to the study and knowledge of the French language - Items 19 to 24 of the questionnaire.
4) Integrative orientation of the student to the study and knowledge of the French language - Items 25 to 30 of the

questionnaire.

5) Student motivation to the study of the French language - Items 31 to 51 of the questionnaire.

6) Parental-Family influence and encouragement to the study of the French language - Items 52 to 70 of the questionnaire.

The results of the data analysis will be presented in two sections. The first section will report and discuss the major findings of the study as shown in Table 1. Table 1, found at the end of chapter IV, page 83 summarizes the statistical information contained in the remaining tables located in Appendix D. The reader who wishes to study the detailed statistical data gathered for each variable is advised to consult these tables in Appendix D.

A detailed description of student answers to certain key items in the questionnaire will comprise the second section. These items were chosen as being most pedagogically relevant and useful to the administration and staff at the Picard School.

For the purposes of this study, only the results at a level of confidence of $p < 0.05$ were considered significant. It must be noted that the analyses of variance for Measure 1: Students' Perceptions of the Achievement in French and Measure 3: Students' Instrumental Orientation to the Learning of French, are not based on the data obtained from all the students participating in the study. Examination of the first analyses of variance indicated that for these two measures, the variances were very unequal. Since the number of students at each grade level was unequal, it was decided to repeat the analysis of variance for these two measures.

Twenty-nine students of each grade and sex were chosen randomly as a representative sample. This explains why for measure 1 and 3, the degrees of freedom for error are 336 while for the other four measures they are 528.

Table 100 (see Appendix D) reports the distribution of the students according to the score they obtained on the "word-completion" balance measure. Groups 1 to 4 represent those students that can be described as French-dominant on this measure. Students belonging to group 5 displayed equilingualism or no language dominance while those in groups 6 to 9 can be described as English-dominant. To increase the reliability of the analysis of variance, some of the groups were combined in order to create groups more equal in terms of number. For this purpose, groups one, two and three were combined to represent a total of 51 students. No other groups were combined.

Similarly for the "word-association" balance measure, the students were divided into nine groups (see Table 101, Appendix D) according to the score they had obtained, i.e. group one represents students who wrote more words in French than in English while at the other end of the scale, group nine describes those students who wrote more in English than in French. Students writing an approximately equal number of English and French words belong to group five. As was done for the first bilingual balance measure, the first four groups were combined in order to produce groups more similar in size, and thereby increase the reliability of the analysis of variance.

This procedure of combining groups to increase the reliability of the analysis of variance was also used for the ranking of students according to their socioeconomic status (see Table 102, Appendix D). Thus, the original groups three, four and five were combined to form group three, the middle class families; groups six and seven were combined to form group four, the lower-middle class families, while groups eight and nine were combined to form group 5, the lower class families.

DISCUSSION OF MAJOR FINDINGS OF THE STUDY

Students' Perceptions of their Achievement in French

This measure, student self-perception of achievement in French, attempted to describe how the students perceive their proficiency in the following four areas of language: a) speaking, b) understanding, c) silent reading, d) writing.

The highest possible score a student could achieve on this measure was 15. Such a score would indicate that the student thinks he has a very good command of French. The lowest score, zero, would indicate that the study and the use of the French language presents many difficulties. The mean scores for this measure ranged from a low of 9.75 (grade 9 boys) to 10.38 (grade 10 girls), a difference of 0.63. Such scores indicate that on the average, students viewed themselves as having a fair command of the French language.

No significant difference was found between male and female students from each grade level. Interestingly enough, the number of years of schooling does not influence the students' self-perception of his ability to master the various facets of the French language. The grade 7 and 12 boys obtained exactly the same mean: 9.90, while the mean of the grade 12 girls was greater than that of the grade 7 girls by only 0.07 (Table 3). However, overall, the girls had a more positive self-perception of their achievement in French than did the boys ($p < 0.019$).

As a group, the grade 10 students judged themselves as those succeeding the most in mastering the various facets of the French language. On the other hand, the grade 9 students viewed themselves as having the most difficulty with the French language. There is no immediate obvious explanation for this occurence. It is possible that as a group, these students do experience more difficulty and frustration in learning French. On the other hand, a close scrutiny and examination of the curricular materials and pedagogical strategies used at that level might shed some light on this situation.

Sixty five students who answered the questionnaire claimed to know a third language. They represent 12% of the population that participated in the study. These trilingual students did not differ significantly from their bilingual counterparts in their self-perception of achievement in French ($p < 0.90$).

Of all the students participating in this study, 143 of them, or 26.5% of the population, claimed to have resided for a

period of at least six months in a French community. These students had a significantly more positive perception of their ability in French than those students who have not had the opportunity to live in such a community ($p < 0.001$).

The grouping of students according to socioeconomic status produced very little difference among them relative to the self-perception of their achievement in French ($p < 0.167$). However it is interesting that it is the students from the highest socio-economic group who obtained the lowest mean, 9.34. When students are grouped according to the socioeconomic status of their parents, it is those coming from higher income families who have the lowest self-perception of ability in French, while students coming from lower income families have a more positive self-concept of their proficiency in the French language. To account for this difference one might hypothesize that parents from higher income levels have higher expectations of ability regarding French for their children. Such high expectations might contribute to the fact that these students see themselves in an inferior way.

Students whose scores on both measures of bilingual balance classified them as "French-dominant" had a significantly more positive self-perception of their achievement in French than did the other students ($p < 0.0001$).

This result conforms to what one would expect - those students who have the most positive perception of their ability in French are also those who demonstrated the greatest facility in writing French words using a two-letter sequence or a French word

as a stimulus-cue.

The results on both bilingual balance measures serve as a check on the validity of the five items used for this measure of student attitude, items 6 to 10 (see Questionnaire, Appendix A). Those students who expressed a stronger dominance of French on both balance measures were also those who perceived themselves as being the most proficient in French.

Students' Satisfaction with the French Program

On this variable, the maximum possible score was 28 which indicated extreme dissatisfaction with the French program at the school. A score of zero would indicate that the student was very satisfied with all aspects related to the teaching of French and in French at Ecole J.H. Picard School.

The mean scores for all groups ranged from 11.77 to 14.18. Such a range provides a rough indication that the majority of the student population were fairly satisfied with the French program. But to graduate students equally fluent in both English and French, the staff and resources at Ecole J.H. Picard School will have to be marshalled to ensure a greater degree of satisfaction among the students toward the teaching of French and in French.

The boys at all grade levels except grades 11 and 12 expressed the most satisfaction with the French program currently used at the school. Their standing on this measure differed from that of the girls at the $p < 0.0006$ level.

The grouping of students according to grade indicates that the French program satisfies the grade 7 and 8 students the most, and the grade 10 and 11 students the least ($p < 0.0001$). Further research should be conducted to determine more precisely which aspects of the French program generate the greatest satisfaction and dissatisfaction among the students.

Students knowing a third language expressed more satisfaction with the French program than did the bilingual students ($p < 0.04$). Why this is so is open to conjecture. A possible interpretation is that for most of these students, the classroom is their only opportunity to further their knowledge of the French language. Consequently, they attempt to make as much use of this opportunity as possible. Also, they cannot compare favorably or unfavorably the classroom situation with other occasions to learn French.

No significant difference was found on this measure between students who have resided in a French community and those who have not ($p < 0.43$). Similarly, no statistically significant results were found for this measure of student attitude when the students were grouped according to socioeconomic status ($p < 0.167$) and ranking on both measures of bilingual balance ($p < 0.225$ - word-completion test; $p < 0.06$ - word-association test).

Students' Instrumental Orientation to Learn French

This third measure of attitude indicated to what extent pragmatic and utilitarian motives underlie the students' resolve

to become fluent in another language.

The highest score that could be obtained on this measure was 24. Such a score indicated that the student strongly disagreed with pragmatic reasons as the justification for second language study. At the other extreme, a score of zero meant that the student was in very strong agreement with a utilitarian outlook on learning a second language.

The scores obtained by the students on this measure manifested clearly that students from all grade levels valued quite highly pragmatic reasons as the rationale for learning French. The girls expressed a higher degree of commitment than the boys to an instrumental orientation to language study ($p < 0.005$). The overall mean for the girls was 8.19 while that of the boys was 10.15.

Students entering the junior and senior levels at the schools, i.e. students in grade 7 and grade 10, subscribed the most to an instrumental orientation to the learning of French, while students in the remaining two junior high levels valued an instrumental orientation the least ($p < 0.0001$). The older students at the high school level did not adopt as strong a utilitarian outlook to second language study as one might have expected since they will soon be on the labour market where the knowledge of a second language could be a definite asset. However there is also the fact that as students progress through language learning, they become increasingly aware of the intrinsic values inherent in a language. They realize that languages perform not only a useful role as a medium of communication but also allow people to commune with a

world outlook and a cultural heritage particular to that one language.

Knowledge of a third language ($p < 0.61$) and the opportunity of having resided in a French community ($p < 0.41$) did not alter significantly the students' commitment to an instrumental orientation to second language study.

The grouping of students according to socioeconomic status indicated that students coming from families having a higher level of income are those expressing the greatest degree of commitment to an instrumental orientation ($p < 0.003$). The opportunities that these students will have in the future to put their knowledge of the French language to use are certainly more numerous. Many of these students will choose professional careers in either the governmental or business arenas where bilingualism will prove to be a definite asset. It is noteworthy that students from lower income families also express much interest in an instrumental orientation to learning French, more so than students from middle-income families.

Students who were ranked as "French-Dominant" on both measures of bilingual balance expressed a significantly greater degree of commitment to learning of French in order to fulfill utilitarian goals ($p < 0.02$). Such results are very understandable. Students who have an expressed facility with French would want and be able to profit as much as possible from their knowledge of the language.

Students' Integrative Orientation to Learn French

The degree to which a student manifested an interest to learn French in order to interact with and become a member of a French speaking community was revealed by this measure.

As with the previous measure, instrumental orientation, the highest possible score is 24. It indicates a complete rejection of second language study in order to gain a deeper insight into the culture of a given people and to be able to communicate with them. A score of zero would indicate a complete allegiance to such an orientation.

The great majority of the students obtained scores in the 5.0 to 7.0 range for this measure (Table 31, Appendix D). This range of scores indicates that the great majority of students attending Picard School recognized the intrinsic value of second language study. Comparison of results from this measure with those obtained on the previous measure shows us that these students did display a stronger integrative than instrumental orientation to the learning of the French language. This might be an implicit admission on the part of the students that the Edmonton setting does not afford them very many opportunities to use their knowledge of French, such as in the possibility of gaining a net advantage with regards to employment opportunities and future income. Such results might also indicate that French for many students has become a means of communication with parents, friends, and members of the local French-Canadian community, as well as a passport to socio-cultural

activities as shown on the French television channel or held in the Edmonton area.

No significant difference was found between the male and female students on this measure ($p < 0.43$). Differences between grades were found. These differences, significant at the $p < 0.01$ level, indicated that students at the grade 12 and 9 levels displayed the strongest integrative orientation to French language study and students at the grade 7 and 8 levels, the weakest.

The grouping of students according to their knowledge of a third language ($p < 0.14$) and to their socioeconomic status ($p < 0.225$) produced no significant results. It would seem that these two student characteristics, trilinguality and socioeconomic background, do not greatly influence a student's integrative orientation to the study of French.

The difference between students having resided in a French community and those who have not is significant at the $p < 0.009$ level. Living in a French community has helped these students become more keenly sensitive to learning French in order to interact with, and become members of a French speaking community. This result would be expected since these students have already experienced the benefits that accompany daily living in such a community.

Students who obtained high French scores on both measures of bilingual balance subscribe more readily to an integrative orientation for learning and using French. The greater ease these students have with the French language gives them the confidence and the

interest to participate more actively in the socio-cultural life of a French community. The difference observed between these students and those experiencing greater difficulty with the French language was significant beyond the $p < 0.02$ level of confidence.

Student Motivation to the Study of the French Language

The maximum score a student could obtain on this variable was 110, indicating no interest in the knowledge or study of French. Consequently, the lower the score, the more positive was the student's attitude to learning French.

The range of the means for all grades was from 60.31 to 68.56. The range of scores obtained indicated that within the student population, the attitude of the students tended to be slightly positive. There definitely remains much ground for improvement in this area. The students seem to have adopted a middle-of-the-road approach. Neither do they accept or reject the possibility of improving their proficiency in French. They appear to be non-commital. It is therefore imperative that serious consideration be given to this situation lest the students become slowly more disinterested towards learning French.

We have just discussed that the great majority of the students admitted unequivocally both the instrumental and integrative orientations to the study of French. They recognized that learning French can play a major role in their life; yet their expressed desire and interest to increase their mastery of this language will not

allow many of them to incarnate the values and advantages of being bilingual. This discrepancy between the value placed on the learning and use of the French language and the degree of motivation to learn the language merits special attention.

This outcome is identical to that observed by Gardner and Lambert (1972) in Louisiana and in Maine.

> For the French-American students, the value of knowing the language seems to outweigh the motivation to learn it. This may mean that they foresee the possible social conflicts that could arise if French became their dominant language (Gardner and Lambert, 1972, p. 87).

Another explanation for this discrepancy, albeit a too human one, may be that the students recognize the worth of bilingualism but are uncertain as to whether it merits the extra work and perseverance required to acquire this skill. This situation illustrates very well the two aspects of motivation. On the one hand we can consider the goal: to be bilingual. On the other hand, we can consider the amount of effort necessary to reach the goal.

How can we encourage the students to expend the effort needed to achieve bilinguality? The problem of how to motivate people to action is a perennial one. To solve this problem, it can be very valuable to know what reasons or situations underlie the students' reluctance to commit themselves both in theory and in practice to becoming bilingual. Detailed descriptions of student responses to certain items in the questionnaire should provide insight into this situation.

The girls had a more positive attitude to the study and use of French than did the boys. The difference between the two groups

was significant at the $p < 0.002$ level (Table 52). This reinforces the widely held belief that second language study is of more interest to girls. With regard to grade levels, the grade 7 and grade 12 students were significantly more interested in ($p < 0.00001$) learning French in comparison to students in the other four grades. The novelty of being first year students at the school could possibly spark greater interest and motivation among the grade 7 students. As for the grade 12 students, they are approaching the end of their secondary schooling. For the majority, it will be their last opportunity to obtain formal instruction of French and in French. Conscious that this is their last opportunity to improve their proficiency in the French idiom, they might therefore be inclined to profit as much as possible of the various opportunities their last year will afford them.

Such results do suggest attitudinal differences at various stages of the language learning process. First year students at the school display more enthusiasm to learning French. This drive wanes in the two following years and then picks up at the grade 12 level. Such a distribution of values approximates a U function. A similar finding was revealed in London, Ontario by Gardner and Smythe (1974). They explain this occurence in the following manner:

> Students in the initial phase of language acquisition are generally enthusiastic, highly motivated and interested in the other language community. One might imagine that the task facing the teachers of such children is rather enjoyable and rewarding. The following years, this enthusiasm seems to wane somewhat. I doubt whether one can easily blame this on the teachers or the curriculum. It seems more

> reasonable to assume that it reflects the demands placed on the student and the fact that he comes to realize that one doesn't "learn" a language overnight. To learn a language one must spend considerable time and effort before the benefits become obvious. It is only after years of study that some sense of proficiency is felt by the student and it is at this point that many of the attitudinal-motivational characteristics evidence an upsurge (Gardner and Smythe, 1972, pp. 44-45).

On this measure, the difference between trilingual and bilingual students was significant at the $p < 0.08$ level. Such a value approximates significance and is worthy of consideration. The observed difference points out that students knowing a third language bring to the task of learning French a more positive set of attitudes. Knowledge of a third language might have increased these students' awareness to the benefits inherent in the knowledge of other languages.

The experience of living in a French community contributed significantly to student motivation. A stronger, more positive attitude to the study of French was found among students who have had the opportunity to live in a French community. The difference between these students and those students who have not enjoyed such an experience was significant at the $p < 0.006$ level.

Socioeconomic factors did not exercise a consistent influence on the motivational outlook of the students. As we go down the socioeconomic scale, the mean does not gradually increase or decrease in value but changes value according to no definite pattern. It is interesting to note that those students belonging to the lowest socioeconomic level expressed the strongest attitude and motivation to the study of French ($p < 0.007$). Why is this so?

Is it because such students see in the knowledge of a second language an opportunity to improve their personal socioeconomic standing in the future? Such students, because of the socioeconomic level of their parents, may have had to work more personally to achieve certain goals and are consequently more willing to expend more effort and energy to gain bilingual fluency. Whether such explanations account accurately for the strength of attitudes found among these students can only be verified through further research.

What information about student attitudes and motivation are revealed when the population is divided according to results on both bilingual balance measures? Did students who scored higher on the French scale demonstrate a stronger positive attitude towards the study of French than students at the other end of the scale? A positive relationship was found between student attitude and student performance on both measures of bilingual balance. The more positive attitudes were held by students who were classified as French dominant. Conversely, students who demonstrated more facility in English were also those whose attitude and motivation to French study was lowest ($p < 0.00008$). Does this mean that students who were French dominant are highly enthusiastic and motivated to become fluently bilingual? Such an assumption cannot be made. Indeed, even the scores obtained by these students reflect a certain ambivalence to the study of French. The students are not against studying French, nor are they overly enthusiastic in spite of their demonstrated ability in the language. Thus we observe that relative success in the study of French is not by

itself sufficient to guarantee an increase in the effort students are to extend to become fluent in both languages.

Parental-Family Influence and Encouragement to the Study of the French Language

The extent to which a student's family and parents encourage him to study French and provide a home atmosphere conducive to its learning is described by this measure.

The highest score a student could obtain on this variable was 74. The interpretation of such a score would be that this family offers absolutely no encouragement to the study of French. At the opposite end of the score, a score of zero would indicate that a student is strongly encouraged in his efforts to pursue his learning of the French language as well as providing him with a home environment where French is the sole language of both oral and written communication.

The values of the mean range from 35.19 (grade 12 girls) to 47.71 (grade seven boys) for this measure. The mid-point value for this variable is 37.5. Thus we note that in most families English is used more often than French. In some families, this is to be expected since one or both parents are not French-speaking. However in the other homes where the parents can speak French, French is not used as often as it could be.

Nogue (1973, p. 36) found that among French-speaking parents whose children were to attend Ecole J.H. Picard School, 38.3% of

them claimed that French was always spoken at home, 31.8% spoke French more than 50% of the time. Thus, three years ago, at least 70% of the parents claimed that French was spoken in their homes more than 50% of the time. This variable measures not only the amount of French spoken in the home. It also deals with the extent to which French television, radio, newspapers and magazines are part and parcel of the family life. Thus it is difficult to establish a direct comparison between Nogue's findings and those values observed in this study. But it can be safely stated that in the majority of the homes the presence of a French atmosphere is a "sometimes" occurence.

The girls perceived their family as being a greater source of encouragement and influence to the study and use of French than did the boys ($p < 0.04$). The reasons underlying such a finding are not immediately obvious. Maybe girls are more receptive to encouragement to learn French. Or possibly, the parents may think that bilingualism is of greater value to their daughters now and in the coming years. One might also surmise that some boys do not find in second language the same appeal and glamour belonging to the scientific-technical areas of learning. If this be true, then boys in their homes might not attempt as often as the girls to seek out and bring about occasions where French could be used.

The grouping of students according to grade level produced no significant results ($p < 0.24$).

The difference between bilingual and trilingual students was significant at the $p < 0.01$ level of confidence, indicating that

the bilingual students received more encouragement and French influence from their family. This result was to be expected as many of the trilingual students come from homes where French is not used. There would be few French magazines or books, if any, in these homes. But this would not prevent the parents and the other members of the family from exercising a positive influence on these students to learn French. The strength of this influence is quite considerable considering that the mean on this variable for students knowing a third language was 46.09 (see Table 75, Appendix D). This mean compares rather favorably with those obtained by the other students.

Students who have lived in a French community come from homes where they are strongly encouraged to learn French and where French is often used as the means of communication. The difference between groups on this variable is significant at the $p < 0.0001$ level. It is evident that living in a French community is correlated to the promotion in students of those attitudes and motivational outlook conducive to successful studies in the French language.

Encouragement to study French and the use of French at home characterizes higher income families. Students coming from such families differed from the other students at the $p < 0.0001$ level. It is difficult to ascertain why socioeconomic level parallels the amount of use of French in the home. Possibly, it could be that the parents enjoying a higher income had more opportunities to learn and improve French when they were young. Or, possibly these

parents participate more often and actively in French social and cultural events, and thereby recognize more readily the value and importance of knowing French. Or again, parents from this income level may foresee for their children professional and semi-professional careers where proficiency in French could be a valuable asset.

The role and importance of parental influence and encouragement become evident when the students were regrouped according to their standing on the two bilingual balance measures. French-dominant students according to the balance measures are those receiving the most encouragement to study French ($p < 0.00001$). It is in their homes where French is used most often as the medium of communication. This illustrates clearly the important role that the family can and must play in ensuring that the students will reach bilingual fluency. Such a role is as important as that played by the school. Only in the home will the student find sufficient opportunity to develop and improve those skills of oral fluency. At school, the student must vie with many other students for the time and attention of the teacher. How often is a student in school given the opportunity to interact in French with the teachers or other personnel of the school? Fifteen minutes is a generous estimate in the investigator's estimation. However can we realistically expect students to reach oral fluency with little time available for its development during school hours? However at home, the opportunities to speak French are plentiful. No matter the curriculum and pedagogy used at school, the family will always have the predominant role to play if the goals of bilingual schools are

to be met. Those students who rely mainly on the school to gain fluency in French will be required to expend more effort and seek out as many opportunities as possible to improve their ability in French should they wish to become bilingual.

Horizontal investigation of Table 1 allows us to perceive more clearly the role and influence that the various student variables exercised on each measure of attitude and motivation.

Sex was not a significant factor on the measure of integrative orientation. On all the other measures except "Student Satisfaction with the French Program", the female students displayed a significantly more positive attitude and motivation to French language study.

Grade was not a significant factor for "Parental-family Encouragement and Influence to the Learning of French". On all other measures of student attitude and motivation, grade level was significant. In summary, it may be stated that students at the grade 7, 10 and 12 levels manifested the most positive attitude and strongest motivation to learning French.

Trilingual students differed from bilingual students on two measures only. Trilingual students expressed more satisfaction with the French program but received less parental-family encouragement and influence to study and use French.

Students who have had the opportunity to live in a French community differed from students not having had such an experience on four of the six measures of attitude and motivation. Students with such an experience enjoyed a more positive perception of their

achievement in French, displayed a stronger integrative orientation to French language study, expressed a stronger motivation to learn French and received a greater amount of encouragement from their parents and family.

The socioeconomic background of a student was a significant factor on three of the six measures. Students from upper income families displayed a stronger instrumental orientation to learning French and received more encouragement from their parents and family to do so. Students from lower level income families were those with the strongest motivation to learn French.

The grouping of students according to their results on both bilingual balance measures produced significant results on five of the six measures of attitude and motivation. No significant difference was found on the measure of "Student Satisfaction with the French Program". On all other measures, the students who were French-dominant on both bilingual balance tests displayed a more positive attitude and a stronger commitment to learning French.

STUDENT ANSWERS TO SELECTED ITEMS OF THE QUESTIONNAIRE

Certain items of the questionnaire were selected by the investigator as being most pedagogically relevant to the staff and administration of Ecole J.H. Picard School. Student answers to these items are given in percentages for each sex and grade in Tables 77 to 99 found in Appendix D. A brief analysis of the student

responses for these questions follow. Some of the items of the questionnaire have been reworded in question form for the purpose of this analysis. These items are the following: #17, 33, 43, 44, 45, 46, 47, 49, 50 and 51.

Question 10 - Table 77:

In which language are you most at ease when speaking?

Very few students feel most at ease speaking French. The highest percentage of students who admitted being more at ease in French was 11.1%. This percentage was attained by the grade 12 girls. At least two thirds of all the students feel more at ease in English than in French. French and English are spoken with equal ease by approximately 20% of the girls and 15% of the boys. Thus for the majority of students, English is the predominant language.

Question 11 - Table 78:

Are you satisfied with the type of skills and abilities (speaking, reading, writing, etc.) you are taught in your French course?

At the grade 8, 10, 11 and 12 levels we meet some dissatisfaction on the part of the students even though few students expressed strong dissatisfaction. At the grade 10 and 11 levels, approximately 25% of the students are somewhat dissatisfied with what they are learning in class. However some degree of satisfaction is registered by the majority of students. Students in grades 7,

9 and 12 expressed the highest degree of satisfaction with the French program. It would be valuable to investigate further why this is so. Is there an age-maturational factor at work here or are there determining curricular differences that account for these results?

Question 13 - Table 79

> Are you satisfied with the type of textbook(s) or printed materials you are using in the French course?

The majority of the students from all grade levels expressed satisfaction with the type of textbooks or printed materials they used in the French course. The grade 7 and 12 students appeared to be those most pleased while dissatisfaction was greatest among the grade 8 population. About 41% of those students had reservations relative to the materials they had to use in their French class.

Question 15 - Table 80

> How much do you like your courses taught in French (e.g. Etudes Sociales) compared to courses taught in English?

Not only French is taught in French at Ecole J.H. Picard School. Social studies, religion, the fine arts, science in grades 7 and 8, Chemistry 10 and many of the courses in business education and home economics are given in French. How much are such courses liked by the students compared to courses taught in English? At all levels except grade 8, 50% to 60% of the students equally like courses taught in French and in English. At the grade 8 level, only 42%

of the students expressed such an opinion. Numbers of students preferring courses taught in English range from 2.8%, grade 12 girls, to 37.8%, grade 8 boys. It is among the grade 10 students that a dislike for courses taught in French is most pronounced. In grade 10, 27.3% of the boys and 18.9% of the girls stated not liking at all their courses taught in French as compared to those where English is the language of instruction. However on the whole, over two-thirds of the total population like the courses taught in French as much as those taught in English.

Question 17-Table 81

How difficult is the study of French compared to other courses such as English, Math and Science?

Very few students find the study of French very easy compared to other courses. At all grade levels except grade 7, 15% to 37% of the students find it rather easy. The majority of the students answered that the study of French was either no more difficult or somewhat more difficult than the study of other courses taught in English. Students experiencing the most difficulty with courses taught in French were at the grade 7, 10 and 12 levels. Interestingly, nearly twice as many girls in grade 7 find the French course more difficult. Approximately one third of grade 10 and 12 students find the curriculum given in English easier to learn. We can conclude from the data given in Table 81 that for the majority of the students, the difficulty inherent in the study of French is not an overriding obstacle for them to overcome in their quest to achieve bilingual

fluency.

Question 18 - Table 82

If you had the opportunity to change the amount of time French is taught in this school, you would:
a) increase the amount of time devoted to French
b) not change the amount of time devoted to French
c) decrease the amount of time devoted to French

Between 50 to 60% of the students would not change the amount of time devoted to French. What should prove to be encouraging to both the staff and administration of the school is that many students, at least one-quarter of the total population, favor increasing the amount of time devoted to French. At the grade 12 level, 50% of the students stated that not enough time was given to French. This could reflect the realization of their still-present inadequacy in French which they would have hoped to overcome by spending more time in the study of the French language. That so few students wished that the amount of time devoted to French be decreased speaks well of the continuing interest the students nourish for the study of French.

Question 33 - Table 83

How often will you try to use your knowledge of French after you leave school?

A significant number of students at all grade levels, at least 80% in most cases, answered that they would try to use

their knowledge of French as often as possible. Very few answered that they would make no attempt to use or remember the French they will have learned. The remaining students, comprising about 15% of the total population, will continue to improve their knowledge of French by watching French television and by making use of any other opportunity they will encounter. Thus, students at this school aim to keep their knowledge and use of French very active in the future. Whether this is wishful thinking or an honest resolution, only time will tell.

Question 35 - Table 84

In what language(s) would you prefer studying social studies?

Presently, social studies is taught in French at all grade levels at Ecole J.H. Picard School. Are students in agreement with this situation? They are not. Less than 10% of the students approve that social studies be taught in French only. The majority prefer that it be taught in both languages. From grades 8 to 11, one-quarter of the student population wish that this subject be taught in English only. We already know from student responses to question 18 that the majority of the students do not wish to decrease the amount of time currently devoted to French. Thus, a plausible interpretation for the data obtained on this question is that many students feel that partial use of English would help them grasp more readily the concepts taught in the social studies curriculum. Their present difficulty is probably due to their relative weakness in

French and the lack of appropriate curricular materials in French.

Question 36 - Table 85

In what language(s) would you prefer studying mathematics?

The great majority of students prefer studying mathematics in English, which is presently the language used to teach this course. However it is interesting to note that about 20% of the grade 7, 9 and 12 students stated that they would not object to having mathematics taught in both French and English.

Question 37 - Table 86

In what language(s) would you prefer studying science?

The majority of students from grades 8 to 12 prefer studying science in English. Only the grade 7 students differ from the other students on this item. Approximately 22% of all grade 7 students prefer studying science in French only. The number of students stating that science should be taught in French only is negligible at all the other grade levels. Presently, science is taught in French only in grades 7 and 8. This situation has met with a favourable response from the grade 7 students but the majority of grade 8 students still prefer learning science in English only. Should this course be taught in both French and English? Approximately 45%of the grade 7 students, 36% of the grade 12 students, 30% of the grade 8 students and 25% of the grade 10 students agreed

that both languages should be used in the teaching of the sciences. These students do not represent the majority. However their numbers are greater than the investigator would have assumed. Nogue (1972, p. 56) found that 32.3% of the parents sending children to Ecole J.H. Picard School approved of French as the medium of instruction for science courses. Both parents and students feared that studying science in French would render understanding more difficult and jeopardize a student's success in later years while attending university or a technical school. Such fears are diminishing on the part of the students as they gain more confidence and ability in French.

Question 38 - Table 87

In what language(s) would you prefer studying home economics and industrial arts?

At least 50% of the total population answered that these courses should be taught in both French and English. Another fifteen to twenty percent of the students chose French as the sole language of instruction. That French should be the choice of so many students may reflect their estimation of the relative value of these courses. Firstly, these courses contain much practical work, and hence, are less dependent on language. Secondly, they are not required as prerequisites to meet admission requirements of Alberta post-secondary institutions. Consequently, one could surmise that students do not perceive the use of French in these courses as detrimental to their understanding or future vocational plans.

Question 39 - Table 88

In what language(s) would you prefer studying usiness ducation?

Business education courses, such as typing, accounting and shorthand, should be taught in both French and English according to 55% of the students. Few students subscribe to having only French used. Approximately 20% of the students did think that these courses should be offered in English only. The benefits and advantages of bilingualism in the secretarial and business fields are thus recognized by a sizeable majority of the student population at this school.

Question 40 - Table 89

In what language(s) would you prefer studying religion?

Language choice for the teaching of religion appears to be French. Religion is the course for which the smallest number of students chose English as the language of instruction. Forty per cent chose French as the language of instruction; another 40% opted for both French and English. The remaining 15% had no definite preference. According to them, either French or English could be used. Such results might result from familiarity on two fronts. Firstly, French has been used for religion classes for most of these students since grade 1. Secondly, many of them attend one of Edmonton's four French parishes. Such past experiences might account for the predominant selection of French as the language of instruction for this particular subject matter.

Question 41 - Table 90

In what language(s) would you prefer studying the fine arts?

Art, music and drama now comprise the fine arts program at Ecole J.H. Picard School. These courses are all taught in French. It seems that many students do not agree with this situation. Indeed, no more than 20% of the students at any grade level thought that these courses should be taught in French. A bit over half of the students believe that both languages should be used. The use of English only is subscribed to by approximately 20% of the grade 8 and 9 students, and 12% of the grade 7 and 10 students. At the grade 11 and 12 levels, very few students chose English as the language of instruction. Thus, as was the case with social studies, home economics, industrial arts and business education, most students prefer a bilingual approach to these courses in preference to unilingual French instruction. The investigator believes that this reflects a lack of confidence on the part of the students relative to their ability to master new concepts in these curricular areas through the medium of French. In no way should it be interpreted as an admission that the students hold no interest or desire in becoming bilingual. This is clearly borne out by the student responses to the following question.

Question 42 - Table 91

Do you wish you could speak, read and write French very well?

Four students answered "no". Ten answered "maybe". The remaining students were split in two groups of nearly equal proportion - one group answering "yes", the other, "very much so". Such results leave absolutely no doubt as to the value the students ascribe to becoming bilingual. Mastery of Canada's official languages is a goal all would like to reach.

Question 43 - Table 92

Why do you attend Ecole J.H. Picard School?

The answers given to the previous question are consonant with the answer given to this question. At all grade levels, at least 50% of the students state that they attend this school in order to obtain a bilingual education. Ten percent of the grade 10 students, 25% of the junior high students and 35% of the grade 11 and 12 students attend this school for the following two reasons: to obtain a bilingual education and to be with their friends. A few students, about 10%, from grades 7, 8 and 10 attend this school for two different reasons: to be with their friends and because their parents oblige them. Only in grades 8, 9 and 10 did a few students state that the sole reason for their being enrolled at Picard was parental pressure.

Question 42 revealed that most of the students want to be bilingual. This question informs us that most of them attend the school to become bilingual. The students know what they want and why they are attending this particular school. The school must

therefore marshall all its available resources to ensure, inasmuch as is possible, the actualization of these student aspirations.

Question 44 - Table 93

Do you intend to learn French in order to have conversations with other French-speaking people?

At least 80% of the students, except those from grade 8, expressed at least an average interest in such an activity. From grade 9 on, the number of students much interested in using their knowledge of French to communicate with other French speakers increases from 35% to 68%. As the students progress through their studies, they realize more and more the value and use of the French language as a means of gaining a port of entry into the world view and culture of a particular group of people. These results certainly confirm the students' choice of an integrative orientation as the main rationale of their learning French.

Question 45 - Table 94

How much interest do you have in being able to listen to French radio programs and/or attend French plays?

The responses given by the students from grade 7 to grade 11 share many similarities. Thirty five percent of these students show little or no interest in learning French for this purpose. Another 35% express moderate interest while the remaining 30% indicate much interest in this use of the French language. At the

grade 12 level, the results differ in two ways. Firstly, only three students answered that they had little interest in listening to French radio programs or attending French plays. All the other students indicated either moderate or much interest. Secondly, the results differ remarkably for the male and female students. Seventy per cent of the boys expressed average interest in comparison to 33% of the girls. On the other hand, only 26% of the boys had much interest for putting their knowledge to such use, in contrast to 61% of the girls. On the whole, we can conclude that we find a reasonable amount of interest in this goal of second language learning.

Question 46 - Table 95

How much interest do you have in being able to watch French television programs?

It is a well-known fact verified daily by the heads of countless households that television exercises a tremendous influence upon the use of the time and ideas of today's young generation. Language appears to be no influence in dampening young people's interest in watching television. Sixty-five per cent of the students at the grade 7, 9,10 and 11 levels stated having moderate or much interest in knowing French to enable them to watch French television programs. Among grade 12 students, this percentage increases to 80% for both male and female students. At the grade 8 level, only 39% of the boys had such a level of interest in French television compared to 60% of the grade 8 girls. The remaining 20% of the

students held little or no interest in learning French to enable them to watch television programs in that language. It is difficult to ascertain if these students prefer not watching French television either because it is in French or because of the type of programming offered on the French channel.

Question 47 - Table 96

How much interest do you have in being able to read French magazines and newspapers?

If the students in general are interested in learning French in order to be able to watch French television, they are even slightly more interested in using their knowledge of French to read French newspapers, magazines and books. Students at the grade 7, 8 and 10 levels are those who manifest the least amount of interest in this area and they represent only 15% of the students at their respective grade levels. We have here an indication that the students not only want to achieve oral mastery in French but also gain more than adequate French reading skills.

Question 49 - Table 97

How often do you read any newspaper, magazine or book written in French?

In the previous question, the students revealed their interest in being able to read various types of printed materials in French. At the present time, how often do they actually take time to read in

French? Across all grade levels, approximately 50% of the students report that "sometimes" best describes the frequency of their French reading. Twenty per cent claim that they often read French printed materials while 30% maintain doing little or no reading in French besides course requirements.

Question 50 - Table 98

How often do you listen to French radio programs?

The French radio station has not yet reached much popularity among the students. Between 60 to 70% of the students state they seldom or never listen to this radio station. Twenty-five per cent report listening to it once in a while. The remaining 10-15% avail themselves of the programming on the French radio station at more frequent intervals. These results are in sharp contrast to those reported for question 45 in Table 94 where at least 65% of all the students claimed learning French in order to listen to French radio programs. Thus the students want to learn French for this purpose, but their actual practice contradicts this claim to a certain extent. It could also be that the students disapprove of the type of programming on the local French radio station or simply do not tune in often enough to realize what it has to offer to teenagers in terms of entertainment value.

Question 51 - Table 99

How often do you watch French television programs?

French television garners a greater percentage of the time of the students than does its sister medium, radio. At all grade levels except grade 8, only 30% of the students state they seldom or never watch French television. At the grade 8 level, this percentage doubles in value. Thus at least two-thirds of the students take advantage of the opportunity to watch the programs on the French channel. They are not regular watchers admittedly but their knowledge of the French language has allowed them this extra choice in their viewing selection.

Table 1

STUDENT ATTITUDES AND MOTIVATIONS IN A BILINGUAL SCHOOL: SUMMARY OF FINDINGS

Attitude and Motivation Measures

STUDENT VARIABLES	Students' self-perception of achievement in French	Student Satisfaction with French Program	Instrumental Orientation	Integrative Orientation	Motivation	Family-Parental Encouragement
SEX	f>m p< 0.019 (3,4)	m>f p< 0.0006 (15,16)	f>m p< 0.005 (27,28)	nd p< 0.43 (39,40)	f>m p< 0.002 (51,52)	f>m p< 0.04 (63,64)
GRADE	10>8>12>7>11>9 p> 0.003 (3,4,5)	7>8>12>9>10>11 p< 0.0001 (15,16,17)	10>7>12>11>8>9 p< 0.0001 (27,28,29)	12>9>11>10>7>8 p< 0.01 (39,40,41)	12>7>10>9>11>8 p< 0.00001 (51,52,53)	nd p<0.24 (63,64,65)
THIRD LANGUAGE	nd p< 0.90 (75)	Tril.> Bil. p< 0.04 (75)	nd p<0.61 (75)	nd p< 0.14 (75)	nd p< 0.08 (75)	Bil.> Tril. p< 0.01 (75)
RESIDENCY IN FRENCH COMMUNITY	R> NR p< 0.001 (76)	nd p< 0.43 (76)	nd p< 0.41 (76)	R> NR p< 0.009 (76)	R>NR p< 0.006 (76)	R> NR p< 0.0001 (76)
SOCIO-ECONOMIC STATUS	nd p< 0.167 (12,13,14)	nd p<0.167 (24,25,26)	U> L> M p< 0.003 (36,37,38)	nd p< 0.225 (48,49,50)	L> U> M p< 0.007 (60,61,62)	U> M, L p< 0.0001 (72,73,74)
WORD-COMPLETION BALANCE MEASURE	FD>ND>ED p < 0.001 (6,7,8)	nd p< 0.225 (18,19,20)	FD>ND, ED p< 0.023 (30,31,32)	FD>ND>ED p< 0.02 (42,43,44)	FD>ND>ED p< 0.00008 (54,55,56)	FD>ND>ED p< 0.000003 (66,67,68)
WORD ASSOCIATION BALANCE MEASURE	FD>ND>ED p < 0.0001 (9,10,11)	nd p< 0.06 (21,22,23)	FD>ND>ED p< 0.014 (33,34,35)	FD>ND>ED p< 0.0007 (45,46,47)	FD>ND>ED p< 0.000003 (57,58,59)	FD>NE>ED p< 0.00001 (69,70,71)

CODE

- f: female students
- m: male students
- nd: no statistically significant difference
- Tril: Trilingual students
- Bil.: Bilingual students
- R: students who have resided in a French community
- NR: students who have not resided in a French community
- U: Upper income level families
- M: Middle income level families
- L: Lower income level families
- FD: French dominant students
- ED: English dominant students
- ND: Equilingual students
- ( ): The numbers in parenthesis refer to tables in Appendix D which include detailed statistical data and their analyses.

Sample interpretation of top left cell in the table: the girls(f) have a higher or more positive self-perception of their achievement in French than do the boys.

CHAPTER V

SUMMARY, IMPLICATIONS AND FURTHER RESEARCH

SUMMARY

This study focused on the description of the attitudes and motivation to learning French of students enrolled in a bilingual junior-senior high school in Edmonton, Canada: Ecole J.H. Picard School. The investigator administered a 70 item questionnaire he prepared for this purpose. This questionnaire may be found in Appendix A. It aimed to describe the students' attitudes and motivation to second-language learning and to determine whether these differed for the following student variables:

1) Sex
2) Grade: 7 to 12
3) Fluency in two or three languages
4) Residency or non-residency in a French community for a period of at least six months.
5) Socioeconomic status of the family as determined by the Blishen Scale (1968).
6) Measures of student bilinguality:
   a) Word Association Test
   b) Word Completion Test

Gardner and Lambert (1972, pp. 161- 162) used these measures of student bilinguality in their research among Franco-American

students in Maine and in Louisiana.

Measures of attitudes and motivation to second-language learning were:

1) Student's own perception of his achievement in French.
2) Student satisfaction with the French program.
3) Gardner's and Lambert's (1972, p. 148) rating of integrative orientation to learning French.
4) Gardner's and Lambert's (1972, p. 148) rating of instrumental orientation to learning French.
5) Rating of student motivation to the learning of French. Items 1, 3 and 6 of Gardner's and Lambert's (1972, p. 152) Motivational Intensity Scale were used in addition to questions prepared by the investigator.
6) Parental-family encouragement and influence to the learning of French.

Means and variances were calculated for each measure of attitude and motivation. Then, t-test were computed to determine the level of significance for the differences in means for each of the six measures obtained when the students were grouped according to sex, knowledge of a third language and residency in a French community. Analysis of variance was used to test the statistical significance of the differences between the means for each measure of attitude and motivation when the students were grouped according to grade, socioeconomic status and ranking on both measures of bilingual balance. Scheffé's multiple comparison of means was done to identify which pairs of means were significantly different

for the various categories.

A sex by grade frequency count of student responses to certain items of the questionnaire was included in the results. The investigator selected these items as those most pedagogically relevant and useful to the administrators and staff of Ecole J.H. Picard School.

RESULTS

Following are the major findings of this investigation. It must be noted that these findings are particular to the student population of Ecole J.H. Picard School, and should not be generalized to other student populations.

1) Female students perceived themselves as more proficient in French ($p<0.019$), scored higher on instrumental orientation ($p<0.005$), expressed a higher level of motivation for learning French ($p<0.002$) and received more encouragement to learn French from their parents and family ($p<0.04$) than the male students;

2) Male students expressed more satisfaction with the French program than the girls ($p<0.0006$);

3) Male and female students did not differ significantly in their integrative orientation to the study of French ($p<0.43$);

4) Grade 7 and 12 students expressed the greatest amount of motivation to learn French ($p<0.0001$); students at the grade 8 and 11 levels, the least;

5) Students at the grade 7, 9 and 12 levels expressed the most satisfaction with the French program;

6) Students with knowledge of a third language expressed more satisfaction with the French program than the bilingual students. The difference in scores between these two groups of students was significant at the $p < 0.04$ level of confidence.

7) Students knowing a third language reported less French family influence than did bilingual students;

8) Students knowing a third language were not significantly different from bilingual students in their perception of their achievement in French, in their orientation to the study of French and in their level of motivation to learn French;

9) Students who have resided in a French community for a period of at least six months had a more positive image of their ability in French, were more integratively oriented to learn French, were more motivated to learn the language and received more parental-family encouragement to do so. All these findings were significant beyond the $p < 0.01$ level of confidence.

10) Students from upper-income level families showed the strongest instrumental orientation to learning French and received the most parental-family encouragement to learn French when compared with students from other income levels;

11) Students from various income level families did not significantly differ in their self-perception of achievement in French, in their satisfaction with the French program and in the degree of their integrative orientation to the study of French;

12) Students from low-income level families indicated more motivation to learn French than students from other income levels;

13) Students who obtained a high French score on both measures of bilingual balance had a more positive image of their ability in French than students who obtained lower scores, as well as being more motivated to learn French, receiving more parental-family encouragement to learn the language and expressing a stronger integrative orientation. All these findings were significant beyond the $p < 0.05$ level.

14) Students reported that they were more at ease speaking English. Only 10% of the total school population stated being more at ease when speaking in French;

15) Students expressed satisfaction with the French program and the curricular materials it used.

16) Only 9% of the students believed that too much time is given to the French class, while 33% of the students favored increasing the amount of time devoted to French;

17) Students preferred English for the teaching of mathematics and the sciences. They favored the use of both French and English for the other courses;

18) Most students claimed to attend Ecole J.H. Picard School primarily because they want to obtain a bilingual education and thereby achieve competency in both French and English. They plan to use their knowledge of French as often as possible after leaving school;

19) Students preferred television over the press, while the

radio was the least preferred among the French media available in Edmonton;

20) Students subscribed more to an integrative orientation to French language study than to an instrumental orientation;

21) At least two-thirds of the total student population reported that they like courses taught in French as much as the courses taught in English;

22) Students viewed themselves as having a fair command of the French language.

IMPLICATIONS

On the basis of the findings of this study, the following implications may be stated.

1) The students recognized the value and importance of bilingualism but appeared non-committal in their resolve to reach the goal of bilinguality. Even students who could be described as "French-dominant" on the measures of bilingual balance were undecided in their commitment to the study of the French language. Thus, relative success in the study and use of French is not sufficient to guarantee an increase in the effort and work required from students to improve their proficiency in the French language. Success in the French courses is not enough to truly motivate the students as explained by Tonney.

> Success in a language course by formal test criteria is seldom highly valued by someone who at the same time realizes that he cannot either speak or read the language well enough for any practical purpose beyond the test

> itself. In many other school subject matters students will accept the teacher's or the examiner's criteria of success. In language, however, they are always able to compare the usefulness of their skill with that in their native language at some desired level of skill (Tonney, 1970, p. 46).

Additional motivation both in school and external to the school is therefore required for students to pursue and achieve in a more active manner the goals of bilingual education.

The absence of enthusiasm for French-language study among most students cannot be attributed to the level of difficulty of the French courses. Indeed, two-thirds of the students stated that learning in French was as easy as learning in English. Thus, the difficulties in the study of French do not appear to be an obstacle for them in their quest to achieve bilingual fluency. Furthermore, one cannot expect to automatically motivate a student by giving him easy tasks to accomplish.

> In fact, easy work is not likely to challenge him or fulfill his needs for idealization, and easy work will not let him conceive of himself convincingly as a competent controller of his own environment. A small or petty task does not earn his respect. A large or difficult task will, if the teenager is motivated to undertake it and if it is of reasonable scope; the teacher can guide in discouraging the student from undertaking tasks beyond his ability (Ayer, 1968, p. 57).

According to Lambert's studies (Lambert, 1963, 1967) a prime factor in a student's attitudinal outlook to learning a second language is a sympathetic orientation toward the other linguistic group. If this is so, the school staff must implement curricular and pedagogical strategies that will increase the students' admiration for the culture of the people whose language they are learning. To do this superficially is often easy but it can become

a difficult task when one attempts to do it at a level where it will sufficiently motivate students to the sustained individual efforts necessary for successful second-language learning. For example, to increase the students' awareness and appreciation of the French-Canadian language and culture, student exchanges could be established with schools in Québec. These exchanges need not be for the duration of one year. Exchanges of only one month could prove to be extremely valuable. Pond (1968) suggests three other lines of action that a school could adopt to create or increase the students' interest in the culture of the people whose language they are learning. His first suggestion is to present the culture often but in small doses. Secondly, the classroom teacher must seriously attempt to discover what his students value and admire. Only in this way will the teacher be in a position to present to the class cultural values the students will be willing to emulate. Teachers must always bear in mind that what they value and what their students value can often be quite different. Finally, the teacher often represents in the eyes of the students the culture that is being studied. Teachers must realize this fact as Pond reminds us:

> ...it seems to me that the students, especially at the early stages, make a close association between the teacher and the culture he is attempting to teach. Rightly or wrongly, and to varying degrees, the students look upon the teacher as representing the target culture, and, by extension, will often like or dislike, feel sympathy or antipathy, depending on how they feel toward the teacher (Pond, 1968, p. 16).

Students will learn French if they feel there is a reason for them to do so - the true source of motivation. This implies that the students must be increasingly involved in providing the staff with their ideas and suggestions in the development of a more

relevant and interesting curriculum. The views of students, often overlooked by adults, must be considered since they greatly determine their attitude toward the school and the curriculum it teacher. A teacher-guided, but not teacher-dominated classroom can improve the situation. Such student participation will allow them to know the reasons underlying various classroom activities. Knowledge of these reasons will help promote student motivation as explained by Hilgard and Russell (1950). Student participation will also allow the teachers to gain a keener insight and understanding of the students' needs and interests. Only by such understanding will teachers know how to modify the curriculum in order to effectively motivate the students.

> "Motivation" is not a fuel poured in from outside to provide energy for learning or a goad operated by an outside agent poking the learner to move. Such concepts suggest that a teacher can produce, with some magical formula, an automatic increase in the attention or effort that students will put into whatever lesson the teacher gives. In fact, the teacher can manipulate motivation only by supplying and organizing lesson content to fit the existing needs and desires of the students. Motivation is not an independent factor coming from another source, but it is itself a function of content, materials and methods (Torrey, 1970, p. 36).

Students are not to be passive participants in the educational process. The key to their involvement is communicating with them. If through his involvement we can make the student want to learn, the student has made a big step in the right direction. And that is what motivation is all about.

To ensure reaping the benefits of student involvement, the central administration, the school staff, the students and the parents must seriously consider the advantages of individualizing

the French program in the school. Individualization may well provide both faculty and students with a language learning situation that is relevant and responsive to student needs and interests. The sequencing of materials, exercises and concepts brought about by individualization will maximize the students' probabilities of success and thereby serve as a strong motivating force.

2. Seventy-two percent of students from all grade levels feel more at ease in speaking English while eighteen percent claim to be equally at ease in both languages. Increased consideration must be given to the development of their expression in French. Dialogues, dramas, games, competitions, debates, oral talks, panel discussions as well as drill can provide realistic motivation if they make it necessary to use the language in a context of communication.

> The important characteristic of daily and weekly work in maintaining motivation is not its novelty or entertainment value as such, nor is it the particular intellectual content. What counts is that it gives the experience of using the language successfully for some outside purpose rather than merely practicing its forms. Only in this way can it be seen as advancement toward the long-term goal (Torrey, 1970, p.40).

Language learning will then be relevant to the specific individual interests and needs of the students. Extra time must also be given to the teaching staff in order to develop interesting programs and exercises that could be used in the language laboratory. Many commercial programs are currently available but very few are adequate to answer the requirements of Franco-Canadian students living in Western Canada.

3. Many homes do not provide enough encouragement for the students to learn French, nor do they present sufficient opportunity

for the students to practise and improve their ability to communicate in French. Admittedly, the majority of students stated that their parents encouraged them in their study of French. However the results obtained for the measure of parental-family influence indicate only too clearly that French as a medium of communication in the home is far from being a daily occurence. If this is so, the school must attempt to sensitize the parents to the role they can and must play in promoting in their children those attitudes conducive to learning French. Parents, too, must be motivated and encouraged to give their children the example of using French as often as possible in their home. To do so demands a great deal of patience, understanding and conviction, all of these necessary if parents are not to become naïve subscribers to the maxim: "Do as I say but not as I do". That parental-family influence and encouragement plays a vital role in the maintenance and progress of bilingualism among the students is borne out by the finding that the French-dominant students came from homes where French was spoken the most often. The important role parents play in the development of their children's orientation toward another linguistic group is also confirmed by the studies of Gardner (1960), Peal and Lambert (1962) and Feenstra (1967).

If on the other hand English is used more often in the home because the family members do not have an adequate knowledge of French, the school should consider establishing night classes for these people. Support in the areas of finance and personnel should be provided by the school board to help ensure the success of

such a program.. Students coming from these homes will have to seek out occasions to converse in French both in and out of schools to improve their oral fluency.

4. The French media in Edmonton do not enjoy a broad following among the students. In order to encourage and maintain student interest in these media, steps in the area of promotion must be taken by both the school and the respective media to ensure that the students are aware of programs or articles that could be of interest to them. The organization of field trips to the radio and television stations plus student involvement and participation in programs geared to their interests might generate among the students a greater desire to avail themselves of the entertainment and information offerings of these media. The school through its music and French language programs and its student social activities could attempt to acquaint the student body with the better known French-Canadian rock and folk singers. This might encourage the students to select more often the French radio station to listen to the most popular compositions on the hit parade. The media should also attempt to discover by the use of questionnaires, surveys and interviews the opinions of the students. As a result, they could attempt to become more responsive to the students' needs and interests.

5. Only nine percent of the total student population affirmed that too much time was given to the teaching of French. In fact, twenty-five percent of the students wish more time be given to French language teaching. However this finding, as encouraging as it is, must be viewed in the light of another finding: according to most

students, mathematics and science courses should be taught in English while instruction in the other courses should be in both languages. For example, social studies is currently taught at all grade levels in French. But only ten percent of the students agree with this situation, stating that this course should be taught in both languages. Such findings express the students' lack of confidence in their ability to master new concepts through the medium of the French language. Students want as much or more French but not at the expense of content mastery. Consequently the school staff should be provided with the time and facilities necessary to find and develop curricular materials and expertise appropriate to the level of competence in French already achieved by the students. As a first step, the essential mathematics-science French vocabulary could be made available to all students.

The students' wish that most courses be taught in both languages merits serious consideration. The use of this procedure has been shown to produce significant results among bilingual students as evidenced by experiments conducted by Kolers. Kolers illustrates his findings in the following way:

> . . .suppose one wanted to give a student two lessons in geography. If the student knew two languages, he would retain as much geography from one lesson in each language as from two lessons in one of them. Moreover, he would be able to talk about geography readily in both languages. On the other hand, teaching his geography in one language and also teaching him a second language would not necessarily enable him to express his knowledge of geography in the second language without some kind of additional instruction (Kolers, 1968, p.63).

6. An intrumental orientation to French language study is favored more strongly by students at the junior high level. Conse-

quently, it would be valuable to better acquaint the high school students with the many career opportunities available to bilingual people in the worlds of government, business, culture and the arts.

FOR FURTHER RESEARCH

Further research conducted in the following areas could prove to be valuable to all those concerned with bilingual education:

1. At the grade 7 and 12 levels, there was a significant difference between the male and female students relative to each groups' degree of satisfaction with the French program. Further research could be conducted to ascertain which elements of the French program meet the least favor from the grade 7 girls and the grade 12 boys, the two groups who indicated the most dissatisfaction with the French program.

2. On many items of the questionnaire, the grade 8 students expressed the greatest degree of negative attitude and motivation to the learning of French. Is such a phenomenon common to second year students in a junior-senior high school or is it a trait particular to this group of students?

3. Twelve percent of the students claim to be trilingual. Another study could focus on this group of students to discover more information about their attitudes and motivation, their home background, their ranking on measures of bilingual balance and their socioeconomic status.

4. It was found that girls receive or perceive receiving

more encouragement from their families to study French than do boys. Research could be conducted to discover the reasons underlying this finding.

5. Students at the grade 7, 9 and 12 levels expressed the most satisfaction with the French program. This fluctuation in student satisfaction should be investigated to discover if it is related to curriculum or to an age-maturation process.

6. This study was based on an objective questionnaire. Further relevant data could be obtained by using subjective questionnaires and interviewing both students and staff at the school.

7. This study was conducted in an urban setting. A similar investigation could be conducted in other rural areas of Alberta where bilingual schools exist. This would serve to delineate the different influences urban and rural settings bring to the development of student attitudes and motivation.

8. This research has investigated student attitudes and motivation to second language learning. Further research could be conducted to determine to what extent these attitudes and motivation differ from those held for other courses such as English, mathematics and science.

9. Action based research could be introduced by exposing comparable classes of students to different curricula, to different pedagogical procedures, to different motivational strategies and observe the consequences of these changes on the students' attitudes and motivation.

10. Further research could focus on the students' attitudes toward their own linguistic group and toward the Canadian culture that surrounds them. Gardner and Lambert (1972) found that these attitudes among Franco-American students influence the students' progress in mastering both French and English. If the student can resolve the cultural conflict so that he can perceive himself as both French-Canadian and English-Canadian, he will more readily develop proficiency in both languages according to the findings of Gardner and Lambert (1972).

11. Examination of stereotypes students have of French-Canadian people should be conducted among the students. The extent to which these stereotypes influence a student's attitudes and motivation to learn and use French should also be investigated.

FOOTNOTES

FOOTNOTES

[1]"He who stops using his mother-tongue, loses his faith."

[2]Edmonton's annual sugaring-off party.

BIBLIOGRAPHY

BIBLIOGRAPHY

ANDERSSON, T. "A New Focus on the Bilingual Child." Modern Language Journal, 1965, 49, 156-65.

ANISFELD, M. and LAMBERT, W.E.. "Social and Psychological Variables in Learning Hebrew." Journal of Abnormal and Social Psychology, 1961, 63, 524-29.

AYER, G.W. "Discussion of Professor Goding's Presentation." Dimension: Language 68, Edited by S. Newell. Proceedings of the Fourth Conference on Language Teaching, New Orleans, 1968, 59-59.

BLISHEN, B.R.; JONES, F.E.; NAEGELE, K.D.; and PORTER, J. Canadian Society. Toronto: MacMillan, 1968.

BROSSEAU, J.F. "Factors Influencing Second Language Learning." Unpublished Master's Thesis, University of Alberta, 1965.

CARROLL, J.B.; SAPON, S.M.; and RICHARDS, S.E. "Construction and Validation of a Test Battery for Predicting Success in Spoken Foreign Language Courses." The Harvard Language Aptitude Project: Report No. 1, Cambridge, Massachusetts, June, 1954. (Mimeographed.)

CARROLL, J.B. and SAPON, S.M. "Cross Validation of Foreign Language Aptitude Tests with a Second Air Force Trial Course Sample." The Harvard Language Aptitude Project: Report No. 2, Cambridge, Massachusetts, February, 1955. (Mimeographed.)

CARROLL, J.B. and SAPON, S.M. "Supplement I to Examiner's Manual - Psi-Lambda Foreign Language Aptitude Battery." Harvard University, 1956. (Mimeographed.)

DE CECCO, J.P. The Psychology of Learning and Instruction: Educational Psychology. New Jersey: Prentice-Hall, 1968.

DUNKEL, N.B. Second-Language Learning. Boston: Ginn, 1948.

ERVIN, S. Identification and Bilingualism. Harvard University, 1954. (Mimeographed.)

FEENSTRA, H.J. Aptitude, Attitude and Motivation in Second-Language Acquisition. Unpublished Doctoral dissertation. The University of Western Ontario, 1967.

FEENSTRA, H.J. and GARDNER, R.C. "Aptitude, Attitude and Motivation in Second-Language Acquisition." Research Bulletin No. 101, University of Western Ontario, 1968.

FERGUSON, G.A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill, 1971.

GARDNER, R.C. "Motivational Variables in Second Language Acquisition." Unpublished Doctoral thesis, McGill University, Redpath Library, 1960.

GARDNER, R.C. "Motivational Variables in Second-Language Learning." International Journal of American Linguistics, 1966, 32, 124-44.

GARDNER, R.C. and LAMBERT, W.E. "Motivational Variables in Second-Language Acquisition." Canadian Journal of Psychology, 1959,13, 266-72.

GARDNER, R.C. and LAMBERT, W.E. Attitudes and Motivation in Second-Language Learning. Massachusetts: Newbury House, 1972.

GARDNER, R.C. and SMYTHE, P.C. "The Integrative Motive in Second-Language Acquisition." Bilingualism, Biculturalism & Education. Proceedings from the conference at Collège Universitaire Saint-Jean, The University of Alberta, 1974.

GULUTSAN, M. "Cultural Differences in Language Learning: The Edmonton Situation." Bilingualism, Biculturalism & Education. Proceedings from the conference at Collège Universitaire Saint-Jean, The University of Alberta, 1974.

HEIDENREICH, C.A. A Dictionary of General Psychology: Basic Terminology and Key Concepts. Dubuque, Iowa: Kendall-Hunt, 1970.

HENMON, V.C.A. "Prognosis Tests in the Modern Foreign Languages." Publications of the American and Canadian Committees on Modern Foreign Languages, 1929, 14, 3-31.

HILGARD, E.R. and RUSSELL, D.H. "Motivation in School-learning." Yearbook of the National Society for the Study of Education, IL, Part 1 (1950), 67.

JAKOBOVITS, L.A. Foreign Language Learning. Rowley, Massachusetts: Newbury House, 1970.

JONES, W.R. "Attitude towards Welsh as a Second Language." British Journal of Educational Psychology, 1949, 19, 44-52.

JONES, W.R. "Attitude towards Welsh as a Second Language." British Journal of Educational Psychology, 1950,20, 117-32.

KELLY, L.G., ed. Description and Measurement of Bilingualism. University of Toronto Press, 1968.

KOLERS, P.A. "Bilingualism and Information Processing." Scientific American, March, 1968, 78-85.

LAMBERT, W.E. "Measurement of the Linguistic Dominance of Bilinguals." Journal of Abnormal and Social Psychology, 1955, 50, 199-200.

LAMBERT, W.E. "Psychological Approaches to the Study of Language. Parts I, II." Modern Language Journal, 47, 51-62, 114-121.

LAMBERT, W.E., GARDNER, R.C., OLTON, R. and TUNSTALL, K. A Study of the Roles of Attitudes and Motivation in Second-Language Learning. McGill University, 1962. (Mimeographed.)

LAMBERT, W.E., GARDNER, R.C., BARIK, H.C. and TUNSTALL, K. "Attitudinal and Cognitive Aspects of Intensive Study of a Second Language." Journal of Abnormal and Social Psychology, 1963,66, 358-68.

LIEDTKE, W.W. "Linear Measurement Concepts of Bilingual and Monolingual Children." Unpublished Master's Thesis, University of Alberta, 1968.

MACKEY, W.F. Bilingualism as a World Problem. Montreal: Harvest House, 1967.

MOWRER, O.H. Learning Theory and Personality Dynamics. New York: Ronald, 1950.

NOGUE, A.J. "Parent Expectations with Respect to Bilingual Schools." Unpublished Master's Thesis, University of Alberta, 1973.

O'CONNOR, P. "Discussion of Professor Politzer's Presentation." Dimension: Languages 68. Edited by S. Newell. Proceedings of the Fourth Conference on Language Teaching, New Orleans, 1968, 32-34.

OLSON, D.R. "The Influence of Foreign Language Background on Performance on Selected Intelligence Tests." Unpublished Master's Thesis, University of Alberta, 1962.

OSGOOD, C.E.; SUCI, G.J.; and TANNENBAUM, P.H. The Measurement of Meaning. Urbana: University of Illinois, 1957.

PEAL, E. and LAMBERT, W.E. "The Relation of Bilingualism to Intelligence." Psychological Monographs, 1962, 76, 1-23.

POND, K.S. "Discussion of Professor Lambert's Presentation." Dimension: Language 68. Edited by S. Newell. Proceedings of the Fourth Conference on Language Teaching, New Orleans, 1968, 15-18.

The Revised Ordinances of the North West Territories and Other Ordinances, Regina, 1888, The School Ordinance, Section 82 (1).

The School Ordinance of the North West Territories, Regina, 1892, Section 83 (1).

SISSONS, C.B. Bilingual Schools in Canada. Toronto: Dent, 1916.

SMYTHE, P.C., STENNETT, R.G. and FEENSTRA, H.J. "Attitude, Aptitude and Type of Instructional Program in Second-Language Acquisition." Canadian Journal of Behavioural Science, 1972, 4, 307-21.

TORREY, J.W. "Motivation in Foreign Language Learning." Northeast Conference on the Teaching of Foreign Languages, 1970, 36-48.

WHYTE, W.F. and HOLMBERG, A.R. "Human Problems of U.S. Enterprise in Latin America." Human Organization, 1956, 15, 1-40.

WITTENBORN, J.R. and LARSEN, R.P. "A Factorial Study of Achievement in College German." Journal of Educational Psychology, 1944, 35, 39-48.

APPENDIX A

DIVISIONS AND ITEMS OF QUESTIONNAIRE

This is a questionnaire that attempts to measure how much you are interested in the use and the study of the French language. You are asked to answer honestly all questions. There are no right or wrong answers. Your answers will be kept confidential.

There is no time limit to answer this questionnaire.

Do not write in this booklet. Please use the HB pencil which has been supplied to you. You are to indicate your answers on the answer sheet by placing a mark between the lines as shown at the top of the answer sheet. Let us do the following example together.

Example A: What is the capital of Alberta?

a) Calgary

b) Medicine Hat

c) Red Deer

d) Edmonton

The correct answer to this question is "d". You should therefore have darkened the "d" answer space for Example A on your answer sheet. Should you want to change your answer, be sure to erase completely your first answer.

While you are answering this questionnaire, raise your hand if you do not understand either one of the questions or the answers. Answer all questions.

PART I

1. Please indicate your sex.

   a) Male

   b) Female

2. Please indicate your grade.

   a) 7

   b) 8

   c) 9

   d) 10

   e) 11

   f) 12

3. Besides English and French, do you know other languages well enough to maintain a casual conversation (e.g. talking about a party) ?

   a) Yes

   b) No

4. Have you ever lived in a community for a period of at least six months, where French was the main language of the community? (e.g. Falher, cities and towns in Québec, France, etc.)

   a) Yes

   b) No

5. In the upper left-hand part of your answer sheet, please write your father's occupation. If your father is deceased or not able to work, please state your mother's occupation.

PART II

6. How well do you SPEAK French?

a) with much difficulty
b) with difficulty
c) fairly well
d) very well

7. How well do you UNDERSTAND French?

a) with much difficulty
b) with difficulty
c) fairly well
d) very well

8. How well do you READ French? (silent reading)

a) with much difficulty
b) with difficulty
c) fairly well
d) very well

9. How well do you WRITE French?

a) with much difficulty
b) with difficulty
c) fairly well
d) very well

10. In which language are you most at ease when SPEAKING?

a) A third language: e.g. German, Ukrainian,Polish, etc.
b) Either English or French
c) English
d) French

PART III

11. Are you satisfied with the type of skills and abilities (speaking, reading, writing, etc.) you are taught in your French course?

    a) very satisfied
    b) quite satisfied
    c) fairly satisfied
    d) somewhat dissatisfied
    e) very dissatisfied

12. Are you satisfied with the classroom activities that take place in the French course? (These could include class, group or individual activities.)

    a) very satisfied
    b) quite satisfied
    c) fairly satisfied
    d) somewhat dissatisfied
    e) very dissatisfied

13. Are you satisfied with the type of textbook(s) or printed materials you are using in the French course?

    a) very satisfied
    b) quite satisfied
    c) fairly satisfied
    d) somewhat dissatisfied
    e) very dissatisfied

14. Are you satisfied with the information you have received from your teacher as to how you are progressing in French? (e.g. marks, comments and suggestions on your assignments)

    a) very satisfied
    b) quite satisfied
    c) fairly satisfied
    d) somewhat dissatisfied
    e) very dissatisfied

15. How much do you like your courses taught in French (e.g. Etudes Sociales) compared to courses taught in English?

    a) very much
    b) as much as any other course
    c) a bit
    d) not at all

16. How much do you like your French course as compared to all other courses?

    a) very much
    b) as much as any other course
    c) a bit
    d) not at all

17. Compared to your other courses such as English, Math and Science, the study of French is:

    a) very difficult
    b) somewhat difficult
    c) no more difficult
    d) rather easy
    e) very easy

18. If you had the opportunity to change the amount of time French is taught in this school, you would:

a) increase the amount of time devoted to French
b) not change the amount of time devoted to French
c) decrease the amount of time devoted to French

PART IV-A

Following is a list of reasons frequently given by students for studying French. Read each reason carefully and indicate the extent to which it is descriptive of your own reasons for studying French.

19. I need French in order to finish high school.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

20. One needs a good knowledge of at least one foreign language to merit social recognition- i.e. to be liked and admired by others.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

21. I think French will some day be useful in getting a good job.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

22. I feel that no one is really educated unless he speaks French well

    a) strongly agree

    b) somewhat agree

    c) neither agree nor disagree

    d) somewhat disagree

    e) strongly disagree

23. The knowledge of French seems of great importance in today's world.

    a) strongly agree

    b) somewhat agree

    c) neither agree nor disagree

    d) somewhat disagree

    e) strongly disagree

24. French will be useful in my probable field of study when I leave high school. (e.g. medicine, business, etc.)

    a) strongly agree

    b) somewhat agree

    c) neither agree nor disagree

    d) somewhat disagree

    e) strongly disagree

PART IV-B

25. French will help me to gain good friends more easily among French-speaking people.

    a) strongly agree

    b) somewhat agree

    c) neither agree nor disagree

    d) somewhat disagree

    e) strongly disagree

26. The knowledge of French will help me to better understand the French-speaking people and their way of life, their customs, their culture.

    a) strongly agree

    b) somewhat agree

    c) neither agree nor disagree

    d) somewhat disagree

    e) strongly disagree

27. French will allow me to meet and speak with more and varied people.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

28. French should help me think and behave as the French-speaking people do.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

29. One day I want to visit countries where French is spoken.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

30. French is (or was at one time) spoken by relatives or persons who are (or were) close to me.

a) strongly agree
b) somewhat agree
c) neither agree nor disagree
d) somewhat disagree
e) strongly disagree

PART V

31. Compared to the other students in my French class, I:

a) do less studying than most of them

b) study about as much as most of them

c) study more than most of them

32. If French were not taught in this school, I would:

a) not bother learning French at all

b) attend another school where I could study French

c) pick up French in everyday situations (i.e. read French books or newspapers, try to speak French whenever possible, etc.)

33. After I finish my high school, I will probably:

a) make no attempt to use or remember the French I have learned

b) continue to improve my knowledge of French by watching French television, etc.

c) try to use my knowledge of French as often as possible

34. Compared to my other courses, I:

a) do less work in French than in any other course

b) do about as much work in French as I do in any other course

c) work harder in French than any other course

IN WHAT LANGUAGE(S) WOULD YOU PREFER STUDYING THE FOLLOWING COURSES:

35. Social Studies

a) English only

b) either French or English

c) both French and English

d) French only

36. Mathematics

a) English only
b) either French or English
c) both French and English
d) French only

37. Science

a) English only
b) either French or English
c) both French and English
d) French only

38. Home Economics (cooking and sewing) and Industrial Arts (woodwork,etc.)

a) English only
b) either French or English
c) both French and English
d) French only

39. Business Education (Typewriting, accounting, shorthand)

a) English only
b) either French or English
c) both French and English
d) French only

40. Religion

a) English only
b) either French or English
c) both French and English
d) French only

41. Fine Arts (Art, Drama, Music)

a) English only

b) either French or English

c) both French and English

d) French only

42. Do you wish you could speak, read and write French very well?

a) no

b) maybe

c) yes

d) very much so

43. The main reason I attend Ecole J.H. Picard School is:

a) I want to obtain a bilingual education, i.e. be able to have a good knowledge of French and English.

b) My parents oblige me to attend this school.

c) My friends attend this school.

d) Reasons a) and c)

e) Reasons b) and c)

The following are various skills that learning a second language can emphasize. Indicate how much interest you have in each of them.

44. Being able to have conversations with other French-speaking people.

a) no interest

b) a little interest

c) average interest

d) much interest

45. Being able to listen to radio programs and/or attend French plays.

a) no interest
b) a little interest
c) average interest
d) much interest

46. Being able to watch French television programs.

a) no interest
b) a little interest
c) average interest
d) much interest

47. Being able to read French newspapers, French magazines, etc...

a) no interest
b) a little interest
c) average interest
d) much interest

48. Being able to write letters in French for business or social purposes (e.g. a letter to a friend, a letter to a company)

a) no interest
b) a little interest
c) average interest
d) much interest

49. Do YOU read any newspaper, magazine or book written in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

50. Do YOU listen to French radio programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

51. Do YOU watch French television programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

PART VI

The answer choice "NEVER" may also be used if the person involved is not living at home, is deceased or does not speak French.

52. Does your father speak to you in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

53. Does your mother speak to you in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

54. Do your brother(s) and/or sister(s) speak to you in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

55. Do YOU speak to your father in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

56. Do YOU speak to your mother in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

57. Do YOU speak to your brother(s) and/or sister(s) in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

58. In general, how often do the members of your family speak to each other in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

59. Does your father read any newspaper, magazine or book written in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

60. Does your mother read any newspaper, magazine or book written in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

61. Do your brother(s) and/or sister(s) read any newspaper, magazine or book written in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

62. Does your father listen to French radio programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

63. Does your mother listen to French radio programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

64. Do your brother(s) and/or sister(s) listen to French radio programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

65. Does your father watch French television programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

66. Does your mother watch French television programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

67. Do your brother(s) and/or sister(s) watch French television programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

68. According to your parents, how important is the study of French compared to the study of other courses like English, Math and Science?

a) more important
b) equally important
c) less important

69. How often do your parents encourage you to study French, to read French books, to speak French, etc...?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

70. How often do your parents stress how important French is for you now and later when you will leave school?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

APPENDIX B

STUDENT ANSWER SHEET

NAME STUDENT ATTITUDE AND MOTIVATION
Last First Middle

AGE ____ YEAR OF GRADE ____ ☐ Male ☐ Female DATE ____ / ____ / ____
Years Day Month Year

FACULTY OR SCHOOL M. Lavallée

Ecole J.H. Picard

126

I.D. NUMBER

0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9

PARENT OCCUPATION

1. _____

2. _____

Indicate response by placing a mark between the guidelines as shown in the example. Use HB pencil. Don't make marks longer than guidelines.

Example

A	a	b	c	d																
1	a	b									41	a	b	c	d					
2	a	b	c	d	e	f					42	a	b	c	d					
3	a	b									43	a	b	c	d	e				
4	a	b									44	a	b	c	d					
5	1	2	3	4	5	6	7	8	9		45	a	b	c	d					
6	a	b	c	d							46	a	b	c	d					
7	a	b	c	d							47	a	b	c	d					
8	a	b	c	d							48	a	b	c	d					
9	a	b	c	d							49	a	b	c	d	e				
10	a	b	c	d							50	a	b	c	d	e				
11	a	b	c	d	e						51	a	b	c	d	e				
12	a	b	c	d	e						52	a	b	c	d	e				
13	a	b	c	d	e						53	a	b	c	d	e				
14	a	b	c	d	e						54	a	b	c	d	e				
15	a	b	c	d							55	a	b	c	d	e				
16	a	b	c	d							56	a	b	c	d	e				
17	a	b	c	d	e						57	a	b	c	d	e				
18	a	b	c								58	a	b	c	d	e				
19	a	b	c	d	e						59	a	b	c	d	e				
20	a	b	c	d	e						60	a	b	c	d	e				
21	a	b	c	d	e						61	a	b	c	d	e				
22	a	b	c	d	e						62	a	b	c	d	e				
23	a	b	c	d	e						63	a	b	c	d	e				
24	a	b	c	d	e						64	a	b	c	d	e				
25	a	b	c	d	e						65	a	b	c	d	e				
26	a	b	c	d	e						66	a	b	c	d	e				
27	a	b	c	d	e						67	a	b	c	d	e				
28	a	b	c	d	e						68	a	b	c						
29	a	b	c	d	e						69	a	b	c	d	e				
30	a	b	c	d	e						70	a	b	c	d	e				
31	a	b	c								X	a	b	c	d	e	f	g	h	i
32	a	b	c																	
33	a	b	c																	
34	a	b	c								Y	a	b	c	d	e	f	g	h	i
35	a	b	c	d																
36	a	b	c	d																
37	a	b	c	d							Z	a	b	c	d	e	f	g	h	i
38	a	b	c	d																
39	a	b	c	d																
40	a	b	c	d																

ANSWERS

OVERPRINT ANSWER SHEET

APPENDIX C

DIVISIONS ON BLISHEN SOCIOECONOMIC INDEX USED TO RANK STUDENTS ON SOCIOECONOMIC SCALE

DIVISIONS ON BLISHEN SOCIOECONOMIC INDEX

USED TO RANK STUDENTS ON SOCIOECONOMIC SCALE

Group 9	76.69 - 70.14
Group 8	68.80 - 60.07
Group 7	59.91 - 57.23
Group 6	55.62 - 49.11
Group 5	48.75 - 42.98
Group 4	42.76 - 36.90
Group 3	36.55 - 32.13
Group 2	31.86 - 29.10
Group 1	28.96 - 25.36

The reader who wishes to know the occupations that correspond to this classification is advised to consult Blishen's index (Blishen et al., 1968, 745-750).

APPENDIX D

TABLES

TABLE 2

NUMBER OF STUDENTS BY SEX AND GRADE PARTICIPATING IN THE STUDY

	Males	Females	Total
Grade 7	52	52	104
Grade 8	45	61	106
Grade 9	36	64	100
Grade 10	33	53	86
Grade 11	29	49	78
Grade 12	30	36	66
	225	315	540

TABLE 3

SEX DIFFERENCES IN STUDENTS'

PERCEPTIONS OF THEIR ACHIEVEMENT IN FRENCH

	Mean Boys	Mean Girls	S.D. Boys	S.D. Girls	df	t value	p
Grade 7	9.90	10.15	2.26	2.03	102	-0.59	0.55
Grade 8	10.31	9.98	1.86	2.02	104	0.85	0.40
Grade 9	9.75	9.91	2.23	2.24	98	-0.34	0.74
Grade 10	10.06	10.38	2.18	2.02	84	-0.69	0.49
Grade 11	9.93	10.00	1.79	1.63	76	-0.17	0.86
Grade 12	9.90	10.22	2.23	1.68	64	-0.67	0.51

TABLE 4

TWO WAY ANALYSIS OF VARIANCE OF STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT IN FRENCH ACCORDING TO SEX AND GRADE

Source	SS	df	MS	F	p
A: Sex	20.76	1	20.76	5.72	0.019
B: Grade	68.53	5	13.71	3.77	0.003
AB	60.80	5	12.16	3.34	0.006
Error	1222.43	336	3.64		

Homogeneity of variance χ^2 = 22.93 p = 0.02

TABLE 5

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT IN FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GRADES

	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
Grade 8	0.10				
Grade 9	0.01	0.97			
Grade 10	0.15	0.99	0.93		
Grade 11	0.09	1.00	0.97	0.99	
Grade 12	0.32	0.99	0.76	0.99	0.99

TABLE 6

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT

IN FRENCH ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	51	17-25	French	11.16	4.66
2	47	26-28	Dominance	10.36	3.80
3	97	29-31	no dominance	9.98	4.65
4	117	32-34	English	10.19	3.27
5	82	35-37		9.74	2.83
6	64	38-40	Dominance	9.27	5.75
7	82	41+		9.98	3.18

TABLE 7

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT

IN FRENCH ACCORDING TO THEIR RANKING ON THE WORD-COMPLETION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	117.27	19.55	6	5.00	0.000053
Error	2083.48	3.91	533		

Homogeneity of variance χ^2 = 14.71 p = 0.02

TABLE 8

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT IN FRENCH, IDENTIFYING

SOURCE OF VARIANCE BETWEEN GROUPS ACCORDING TO THEIR RANKING ON THE WORD-COMPLETION BALANCE MEASURE

Group	1	2	3	4	5	6
2	0.68					
3	0.07	0.98				
4	0.20	0.99	0.99			
5	0.01	0.82	0.99	0.88		
6	0.0003	0.22	0.54	0.18	0.91	
7	0.08	0.98	1.00	0.99	0.99	0.59

TABLE 9

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT

IN FRENCH, ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	48	17-28	French dominance	11.24	5.13
2	83	29-31	no dominance	10.37	4.68
3	108	32-34	English	10.12	3.47
4	100	35-37		9.90	3.57
5	109	38-40	Dominance	9.66	3.84
6	92	41+		9.66	3.59

TABLE 10

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT

IN FRENCH ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	110.90	22.18	5	5.67	0.000056
Error	2089.86	3			

Homogeneity of variance $\chi^2 = 4.75$ p = 9.45

TABLE 11

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT IN FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Group	1	2	3	4	5
2	0.31				
3	0.06	0.98			
4	0.01	0.76	0.98		
5	0.001	0.30	0.71	0.98	
6	0.001	0.35	0.76	0.98	1.00

TABLE 12

SUMMARY OF MEANS AND VARIANCES

OF THE STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT

IN FRENCH ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	Income level of family	Number	Mean	Variance
1	upper	41	9.34	5.73
2	upper-middle	164	10.03	3.75
3	middle	116	10.02	3.31
4	lower-middle	90	10.26	5.14
5	lower	129	10.17	3.88

TABLE 13

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT

IN FRENCH ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Source	SS	MS	df	F	p
Groups	26.38	6.60	4	1.62	0.166998
Error	2174,37	4.06	535		

Homogeneity of variance χ^2 = 8.17 p = 0.09

TABLE 14

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS

FOR STUDENTS' PERCEPTIONS OF THEIR ACHIEVEMENT IN FRENCH, IDENTIFYING

SOURCE OF VARIANCE BETWEEN GROUPS ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	1	2	3	4
2	0.43			
3	0.48	1.00		
4	0.22	0.94	0.96	
5	0.26	0.99	0.99	0.99

TABLE 15

SEX DIFFERENCES FOR EACH GRADE

IN STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM

	Mean Boys	Mean Girls	SD Boys	SD Girls	df	t	p
Grade 7	11.77	13.71	4.39	5.48	102	-2.00	0.05
Grade 8	13.11	14.18	4.79	4.88	104	-1.12	0.26
Grade 9	12.31	13.30	4.74	4.47	98	-1.04	0.30
Grade 10	12.52	13.83	3.99	5.43	84	-1.20	0.23
Grade 11	13.24	13.10	4.54	4.88	76	0.13	0.90
Grade 12	13.77	11.47	4.61	4.85	64	1.96	0.05

TABLE 16

TWO WAY ANALYSIS

OF VARIANCE OF STUDENTS' SATISFACTION

WITH THE FRENCH PROGRAM ACCORDING TO SEX AND GRADE

Source	SS	df	MS	F	p
A: Sex	251.56	1	251.56	12.52	0.0006
B: Grade	1667.07	5	333.42	16.59	0.00001
AB	39.31	5	7.86	0.39	0.857442
Error	10712.90	528	20.22		

Homogeneity of variance χ^2 = 15.10 p = 0.18

TABLE 17

PROBABILITY MATRIX BASED ON SCHEFFÉ MULTIPLE COMPARISON OF MEANS FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM, IDENTIFYING SOURCE OF VARIANCE BETWEEN GRADES

	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
Grade 8	0.00001				
Grade 9	0.22	0.002			
Grade 10	0.000002	0.99	0.03		
Grade 11	0.00001	0.99	0.01	0.99	
Grade 12	0.78	0.0007	0.99	0.01	0.003

TABLE 18

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' SATISFACTION WITH THE FRENCH

PROGRAM, ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	51	17-25	French	12.08	16.15
2	47	26-28	Dominance	12.70	16.61
3	97	29-31	no dominance	12.58	24.10
4	I17	32-34	English	12.97	22.93
5	82	35-37		14.07	30.41
6	64	38-40		13.33	24.00
7	82	41+	Dominance	13.60	22.81

TABLE 19

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM,

ACCORDING TO THEIR RANKING ON THE WORD-COMPLETION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	190.50	31.75	6	1.37	0.225411
Error	12368.50	23.21	533		

Homogeneity of variance $\chi^2 = 8.56$ $p = 0.20$

TABLE 20

PROBABILITY MATRIX BASED ON SCHEFFE

MULTIPLE COMPARISON OF MEANS FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	1	2	3	4	5	6
2	0.99					
3	0.99	1.00				
4	0.98	1.00	0.99			
5	0.50	0.88	0.64	0.86		
6	0.93	0.99	0.99	0.99	0.99	
7	0.79	0.98	0.92	0.99	0.99	1.00

TABLE 21

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' SATISFACTION WITH THE FRENCH

PROGRAM, ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	48	17-28	French dominance	11.94	16.32
2	83	29-31	no dominance	12.24	18.50
3	108	32-34	English	13.00	26.90
4	100	35-37		12.95	18.07
5	109	38-40	Dominance	13.75	29.27
6	92	41+		13.98	24.20

TABLE 22

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM,

ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	245.44	49.09	5	2.13	0.06
Error	12313.56	23.06	534		

Homogeneity of variance $\chi^2 = 11.80$ $p = 0.04$

TABLE 23

PROBABILITY MATRIX BASED ON SCHEFFE

MULTIPLE COMPARISON OF MEANS FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	1	2	3	4	5
2	0.99				
3	0.90	0.95			
4	0.92	0.96	1.00		
5	0.45	0.47	0.93	0.92	
6	0.34	0.34	0.84	0.82	0.99

TABLE 24

SUMMARY OF MEANS AND VARIANCES

OF THE STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM,

ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	Income level of family	Number of students	Mean	Variance
1	upper	41	13.98	31.77
2	upper-middle	164	12.55	22.25
3	middle	116	13.62	23.59
4	lower-middle	90	12.57	19.24
5	lower	129	13.41	24.10

TABLE 25

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM,

ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Source	SS	MS	df	F	p
Groups	150.68	37.67	4	1.62	0.166691
Error	12408.31	23.19	535		

Homogeneity of variance $\chi^2 = 3.90$ $p = 0.42$

TABLE 26

PROBABILITY MATRIX BASED ON SCHEFFE

MULTIPLE COMPARISON OF MEANS FOR STUDENTS' SATISFACTION WITH THE FRENCH PROGRAM, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	1	2	3	4
2	0.58			
3	0.99	0.50		
4	0.66	1.00	0.66	
5	0.98	0.68	0.99	0.80

TABLE 27

SEX DIFFERENCES FOR EACH GRADE IN

STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH

	Mean Boys	Mean Girls	SD Boys	SD Girls	df	t	p
Grade 7	9.58	8.48	4.41	4.70	102	1.23	0.22
Grade 8	9.84	9.16	5.15	4.18	104	0.75	0.45
Grade 9	9.33	10.08	3.70	4.08	98	-0.91	0.37
Grade 10	9.24	7.79	3.62	4.20	84	1.64	0.10
Grade 11	9.66	8.90	2.91	4.10	76	0.87	0.39
Grade 12	8.33	9.78	4.56	4.15	64	-1.35	0.18

TABLE~28

TWO WAY ANALYSIS OF VARIANCE OF STUDENTS'

INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH ACCORDING TO SEX AND GRADE

Source	SS	df	MS	F	p
A: Sex	132.83	1	132.83	8.13	0.005
B: Grade	422.46	5	84.49	5.17	0.0001
AB	125.21	5	25.04	1.55	0.175
Error	5444.16	336	16.20		

Homogeneity of variance $\chi^2 = 14.85$ $p = 0.19$

TABLE 29

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS

FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GRADES

	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
Grade 8	0.98				
Grade 9	0.93	0.99			
Grade 10	0.81	0.99	0.99		
Grade 11	0.002	0.03	0.07	0.16	
Grade 12	0.08	0.37	0.56	0.75	0.92

TABLE 30

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	51	17-25	French	8.62	14.31
2	47	26-28	Dominance	8.36	14.15
3	97	29-31	no dominance	9.71	20.77
4	117	32-34	English	9.20	18.66
5	82	35-37		9.51	21.19
6	64	38-40	Dominance	7.84	16.07
7	82	41+		10.06	14.65

TABLE 31

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH,

ACCORDING TO THEIR RANKING ON THE WORD-COMPLETION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	261.43	43.57	6	2.46	0.023487
Error	9440.79	17.71	533		

Homogeneity of variance χ^2 = 6.58 p = 0.36

TABLE 32

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	1	2	3	4	5	6
2	1.00					
3	0.90	0.78				
4	0.99	0.97	0.99			
5	0.97	0.90	1.00	0.99		
6	0.99	0.99	0.27	0.64	0.46	
7	0.72	0.56	0.99	0.91	0.99	0.13

TABLE 33

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	48	17-28	French dominance	7.96	11.02
2	83	29-31	no dominance	9.13	19.34
3	108	32-34	English	8.31	17.88
4	100	35-37		9.57	19.40
5	109	38-40	Dominance	10,04	20.17
6	92	41+		9.45	14.65

TABLE 34

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH,

ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	254.37	50.87	5	2.88	0.014295
Error	9447.86	17.69	534		

Homogeneity of variance $\chi^2 = 7.76$ $p = 0.17$

TABLE 35

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	1	2	3	4	5
2	0.80				
3	0.99	0.88			
4	0.45	0.99	0.47		
5	0.15	0.83	0.11	0.98	
6	0.56	0.99	0.61	0.99	0.96

TABLE 36

SUMMARY OF MEANS AND VARIANCES

OF THE STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	Income level of family	Number of students	Mean	Variance
1	upper	41	8.54	13.50
2	upper-middle	164	8.27	16.56
3	middle	116	13.62	23.59
4	lower-middle	90	9.10	16.83
5	lower	129	9.81	18.29

TABLE 37

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Source	SS	MS	df	F	p
Groups	292.04	73.01	4	4.15	0.003
Error	9410.17	17.59	535		

Homogeneity of variance $\chi^2 = 2.96$ $p = 0.56$

TABLE 38

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' INSTRUMENTAL ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	1	2	3	4
2	0.99			
3	0.41	0.01		
4	0.97	0.69	0.63	
5	0.58	0.05	0.99	0.82

TABLE 39

SEX DIFFERENCES FOR EACH GRADE IN

STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH

	Mean Boys	Mean Girls	SD Boys	SD Girls	df	t	p
Grade 7	6.69	5.73	3.18	4.08	102	1.34	0.18
Grade 8	6.53	6.31	3.82	3.69	104	0.30	0.76
Grade 9	5.50	5.92	3.48	3.39	98	-0.59	0.56
Grade 10	6.64	5.60	3.96	3.82	84	1.20	0.23
Grade 11	5.72	6.33	3.52	3.73	76	-0.70	0.48
Grade 12	5.60	5.11	3.37	3.06	64	0.62	0.54

TABLE 40

TWO WAY ANALYSIS OF VARIANCE OF STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH ACCORDING TO SEX AND GRADE

Source	SS	df	MS	F	p
A: Sex	8.14	1	8.14	0.64	0.43
B: Grade	184.54	5	36.91	2.88	0.01
AB	50.48	5	10.10	0.79	0.56
Error	6775.00	528	12.83		

Homogeneity of Variance $\chi^2 = 16.89$ $p = 0.11$

TABLE 41

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS

FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GRADES

	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
Grade 8	0.82				
Grade 9	0.18	0.90			
Grade 10	0.38	0.98	0.99		
Grade 11	0.18	0.86	0.99	0.99	
Grade 12	0.09	0.92	0.38	0.59	0.35

TABLE 42

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	51	17-25	French	5.33	13.51
2	47	26-28	Dominance	5.32	7.79
3	97	29-31	no dominance	5.73	9.59
4	117	32-34	English	5.61	10.03
5	82	35-37		6.50	17.22
6	64	38-40	Dominance	6.19	13.99
7	82	41+		7.11	17.78

TABLE 43

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH,

ACCORDING TO THEIR RANKING ON THE WORD-COMPLETION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	193.17	32.20	6	2.51	0.020962
Error	6834.76	12.82	533		

Homogeneity of variance χ^2 = 20.70 p = 0.002

TABLE 44

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	1	2	3	4	5	6
2	1.00					
3	0.99	0.99				
4	0.99	0.99	1.00			
5	0.77	0.78	0.92	0.81		
6	0.95	0.95	0.99	0.98	0.99	
7	0.26	0.28	0.36	0.21	0.98	0.88

TABLE 45

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	48	17-28	French dominance	5.29	12.59
2	83	29-31	no dominance	5.04	9.47
3	108	32-34	English	5.52	12.81
4	100	35-37		6.00	12.08
5	109	38-40	Dominance	6.70	14.62
6	92	41+		7.04	13.56

TABLE 46

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH,

ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	279.32	55.86	5	4.42	0.000667
Error	6748.61	12.64	534		

Homogeneity of variance $\chi^2 = 4.62$ $p = 0.46$

TABLE 47

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	1	2	3	4	5
2	0.99				
3	0.99	0.97			
4	0.93	0.65	0.96		
5	0.39	0.07	0.31	0.85	
6	0.18	0.01	0.10	0.53	0.99

TABLE 48

SUMMARY OF MEANS AND VARIANCES

OF THE STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	Income level of family	Number of students	Mean	Variance
1	upper	41	7.20	17.81
2	upper-middle	164	5.53	11.33
3	middle	116	6.42	13.52
4	lower-middle	90	5.48	12.05
5	lower	129	6.25	13.23

TABLE 49

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY

OF FRENCH, ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Source	SS	MS	df	F	p
Groups	147.82	36.96	4	2.87	0.22476
Error	6880.11	12.86	535		

Homogeneity of variance $\chi^2 = 3.99$ $p = 0.41$

TABLE 50

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' INTEGRATIVE ORIENTATION TO THE STUDY OF FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	1	2	3	4
2	0.13			
3	0.84	0.38		
4	0.17	1.00	0.48	
5	0.70	0.58	0.99	0.65

TABLE 51

SEX DIFFERENCES FOR EACH GRADE

IN STUDENTS' MOTIVATION TO STUDY AND USE FRENCH

	Mean Boys	Mean Girls	SD Boys	SD Girls	df	t	p
Grade 7	64.98	65.58	8.44	8.71	102	-0.35	0.72
Grade 8	66.18	68.56	9.75	8.96	104	-1.30	0.20
Grade 9	66.08	66.55	8.29	8.13	98	-0.27	0.79
Grade 10	64.45	66.43	8.37	10.73	84	-0.90	0.37
Grade 11	67.10	67.57	9.81	8.83	76	-0.22	0.83
Grade 12	66.50	60.31	7.61	7.09	64	3.42	0.001

TABLE 52

TWO WAY ANALYSIS OF VARIANCE

OF STUDENTS' MOTIVATION TO STUDY AND USE FRENCH ACCORDING TO SEX AND GRADE

Source	SS	df	MS	F	p
A: Sex	676.74	1	676.74	9.19	0.002719
B: Grade	3339.87	5	667.97	9.07	0.00001
AB	93.00	5	18.60	0.25	0.938188
Error	39163.00	528	74.17		

Homogeneity of Variance χ^2 = 16.00 p = 0.14

TABLE 53

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS

FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GRADES

	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
Grade 8	0.0002				
Grade 9	0.07	0.71			
Grade 10	0.04	0.88	0.99		
Grade 11	0.05	0.91	0.99	0.99	
Grade 12	0.97	0.0001	0.02	0.01	0.01

TABLE 54

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' MOTIVATION TO STUDY AND USE

FRENCH, ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	51	17-25	French	61.57	53.97
2	47	26-28	Dominance	63.87	56.38
3	97	29-31	no dominance	65.81	58.07
4	117	32-34	English	65,32	72.86
5	82	32-34		68.79	98.54
6	64	38-40	Dominance	67.64	80.77
7	82	41+		67.32	104.52

TABLE 55

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH

ACCORDING TO THEIR RANKING ON THE WORD-COMPLETION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	2225.00	370.83	6	4.84	0.00008
Error	40855.00	76.65	533		

Homogeneity of variance χ^2 = 15.35 p = 0.02

TABLE 56

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	1	2	3	4	5	6
2	0.95					
3	0.24	0.96				
4	0.37	0.99	0.99			
5	0.0018	0.15	0.53	0.27		
6	0.04	0.54	0.95	0.82	0.99	
7	0.04	0.59	0.97	0.87	0.98	1.00

TABLE 57

SUMMARY OF MEANS AND VARIANCES

FOR STUDENTS' MOTIVATION TO STUDY AND USE

FRENCH, ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	48	17-28	French dominance	60.60	46.63
2	83	29-31	no dominance	64.16	75.02
3	108	32-34	English	65.46	62.25
4	100	35-37		66.42	89.64
5	109	38-40	Dominance	68.41	80.19
6	92	41+		67.99	85.88

TABLE 58

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH

ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Source	DS	MS	df	F	p
Groups	2726.00	545.20	5	7.21	0.000003
Error	40354.00	75.57	534		

Homogeneity of variance χ^2 = 9.04 p = 0.10

TABLE 59

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Group	1	2	3	4	5
2	0.41				
3	0.07	0.96			
4	0.01	0.61	0.98		
5	0.001	0.05	0.28	0.74	
6	0.001	0.13	0.52	0.90	0.99

TABLE 60

SUMMARY OF MEANS AND VARIANCES

OF THE STUDENTS' MOTIVATION TO STUDY AND USE

FRENCH, ACCORDING TO THEIR RANKING ON THE WORD-ASSOCIATION BALANCE MEASURE

Group	Income level of family	Number of students	Mean	Variance
1	upper	41	66.34	97.33
2	upper-middle	164	65.42	64.08
3	middle	116	68.51	90.27
4	lower-middle	90	66.13	101.15
5	lower	129	64.42	64.42

TABLE 61

ONE WAY ANALYSIS OF VARIANCE

FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH,

ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Source	SS	MS	df	F	p
Groups	1112.00	278.00	4	3.54	0.007241
Error	41968.00	78.44	535		

Homogeneity of variance χ^2 = 10.73 p = 0.03

TABLE 62

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR STUDENTS' MOTIVATION TO STUDY AND USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	1	2	3	4
2	0.99			
3	0.77	0.08		
4	1.00	0.98	0.46	
5	0.83	0.92	0.01	0.74

TABLE 63

SEX DIFFERENCES FOR EACH GRADE

IN PARENTAL-FAMILY INFLUENCE TO USE FRENCH

	Mean Boys	Mean Girls	SD Boys	SD Girls	df	t	p
Grade 7	47.71	38.29	18.27	14.84	102	2.89	0.005
Grade 8	44.09	40.26	15.68	16.39	104	1.21	0.23
Grade 9	40.22	39.25	15.83	16.75	98	0.28	0.78
Grade 10	42.85	39.77	17.31	14.15	84	0.90	0.37
Grade 11	41.28	40.53	14.73	14.83	76	0.22	0.83
Grade 12	42.23	35.19	14.85	14.57	64	1.94	0.06

TABLE 64

TWO WAY ANALYSIS OF VARIANCE

OF PARENTAL-FAMILY INFLUENCE TO USE FRENCH, ACCORDING TO SEX AND GRADE

Source	SS	df	MS	F	p
A: Sex	1002.09	1	1002.09	3.98	0.04
B: Grade	1679.92	5	335.98	1.34	0.24
AB	879.00	5	175.80	0.70	0.63
Error	133225.00	528	251.60		

Homogeneity of variance $\chi^2 = 5.66$ $p = 0.89$

TABLE 65

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS

FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GRADES

	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
Grade 8	0.91				
Grade 9	0.86	0.99			
Grade 10	0.99	0.85	0.79		
Grade 11	0.80	0.99	0.99	0.73	
Grade 12	0.99	0.86	0.80	0.99	0.74

TABLE 66

SUMMARY OF MEANS AND VARIANCES

FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH,

ACCORDING TO STUDENT RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	51	17-25	French	31.76	320.98
2	47	26-38	Dominance	35.21	246.52
3	97	29-31	no dominance	40.49	275.98
4	117	32-34	English	40.87	203.55
5	82	35-37		43.90	218.81
6	64	38-40	Dominance	43.02	238.11
7	82	41+		46.01	219.52

TABLE 67

ONE WAY ANALYSIS OF VARIANCE

FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH,

ACCORDING TO STUDENT RANKING ON WORD-COMPLETION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	8959.95	1493.32	6	6.22	0.000003
Error	127999.69	240.15	533		

Homogeneity of variance $\chi^2 = 5.44$ $p = 0.49$

TABLE 68

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-COMPLETION BALANCE MEASURE

Group	1	2	3	4	5	6
2	0.98					
3	0.10	0.72				
4	0.06	0.61	1.00			
5	0.004	0.16	0.91	0.93		
6	0.02	0.33	0.98	0.99	1.00	
7	0.0002	0.03	0.47	0.51	0.99	0.97

TABLE 69

SUMMARY OF MEANS AND VARIANCES

FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH,

ACCORDING TO STUDENT RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	Number of students in group	Raw score	Language Dominance	Mean	Variance
1	48	17-28	French dominance	31.23	258.61
2	83	29-31	no dominance	36.70	242.46
3	108	32-34	English	38.76	249.22
4	100	35-37		43.91	276.57
5	109	38-40	Dominance	45.00	189.39
6	92	41+		44.40	220.88

TABLE 70

ONE WAY ANALYSIS OF VARIANCE

FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH,

ACCORDING TO STUDENT RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Source	SS	MS	df	F	p
Groups	10323.00	2064.60	5	8.71	0.00001
Error	126636.63	237.15	534		

Homogeneity of variance $\chi^2 = 4.31$ $p = 0.50$

TABLE 71

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON WORD-ASSOCIATION BALANCE MEASURE

Group	1	2	3	4	5
2	0.58				
3	0.16	0.97			
4	0.001	0.08	0.33		
5	0.0001	0.02	0.11	0.99	
6	0.0005	0.05	0.25	0.99	0.99

TABLE 72

SUMMARY OF MEANS AND VARIANCE

OF PARENTAL-FAMILY INFLUENCE, ACCORDING

TO STUDENT RANKING ON THE SOCIOECONOMIC SCALE

Group	Income level of family	Number	Mean	Variance
1	upper	41	36.76	263.24
2	upper-middle	164	37.12	194.49
3	middle	116	44.70	214.44
4	lower-middle	90	40.83	326.89
5	lower	129	43.85	274.46

TABLE 73

ONE WAY ANALYSIS OF VARIANCE

FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH,

ACCORDING TO STUDENT RANKING ON THE SOCIOECONOMIC SCALE

Source	SS	MS	df	F	p
Groups	5834.87	1458.72	4	5.95	0.000108
Error	131124.75	245.09	535		

Homogeneity of variance χ^2 = 10.01 p = 0.04

TABLE 74

PROBABILITY MATRIX BASED ON SCHEFFE MULTIPLE COMPARISON OF MEANS FOR PARENTAL-FAMILY INFLUENCE TO USE FRENCH, IDENTIFYING SOURCE OF VARIANCE BETWEEN GROUPS OF STUDENTS ACCORDING TO THEIR RANKING ON THE SOCIOECONOMIC SCALE

Group	1	2	3	4
2	1.00			
3	0.10	0.004		
4	0.75	0.52	0.55	
5	0.17	0.01	0.99	0.74

TABLE 75

T-TEST: COMPARISON BETWEEN BILINGUAL STUDENTS
AND STUDENTS KNOWING A THIRD LANGUAGE ON THE SIX VARIABLES

	Mean 3L	Mean Bil.	SD 3L	SD Bil.	df	t	p
Variable 1	10.03	10.05	2.27	1.99	538	-0.07	0.90
Variable 2	11.95	13.25	4.53	4.85	538	-2.04	0.04
Variable 3	8.92	9.22	4.31	4.24	538	-0.52	0.61
Variable 4	6.63	5.93	3.67	3.60	538	1.48	0.14
Variable 5	64.25	66.28	8.26	9.01	538	-1.72	0.08
Variable 6	46.09	40.24	18.76	15.40	538	2.79	0.01

TABLE 76

T-TEST: COMPARISON BETWEEN STUDENTS WHO HAVE LIVED IN A FRENCH COMMUNITY (FC) AND THOSE WHO HAVE NOT ON THE SIX VARIABLES

	Mean FC	Mean	SD FC	SD	df	t	p
Variable 1	10.59	9.85	2.18	1.93	538	3.77	0.001
Variable 2	13.37	13.00	4.99	4.77	538	0.80	0.43
Variable 3	8.93	9.27	4.22	4.25	538	-0.83	0.41
Variable 4	5.34	6.25	3.47	3.63	538	-2.62	0.009
Variable 5	64.27	66.67	8.26	9.10	538	-2.76	0.006
Variable 6	32.70	43.92	15.00	15.22	538	-7.58	0.0001

TABLE 77

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 10

Question 10: In which language are you most at ease when SPEAKING?
a) A third language: e.g. German, Ukrainian, Polish, etc.
b) Either English or French
c) English
d) French

Answer choice:		a)	b)	c)	d)
Grade 7:	M	0.0	15.4	75.0	9.6
	F	0.0	30.8	65.4	3.8
Grade 8:	M	0.0	26.7	64.4	8.9
	F	0.0	28.3	68.3	3.3
Grade 9:	M	2.7	8.1	83.8	5.4
	F	4.7	10.9	82.8	1.6
Grade 10:	M	3.0	15.2	78.8	3.0
	F	1.9	22.6	66.0	9.4
Grade 11:	M	0.0	13.8	86.2	0.0
	F	4.1	20.4	71.4	4.1
Grade 12:	M	3.3	26.7	66.7	3.3
	F	2.8	22.2	63.9	11.1

TABLE 78

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 11

Question 11: Are you satisfied with the type of skills and abilities (speaking, reading, writing, etc.) you are taught in your French course?

a) very satisfied
b) quite satisfied
c) fairly satisfied
d) somewhat dissatisfied
e) very dissatisfied

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	25.0	40.4	25.0	5.8	3.8
	F	23.1	53.8	21.2	0.0	1.9
Grade 8:	M	8.9	40.0	28.9	13.3	8.9
	F	15.0	33.3	25.0	20.0	6.7
Grade 9:	M	27.0	32.4	35.1	5.4	0.0
	F	26.6	46.9	21.9	4.7	0.0
Grade 10:	M	9.1	21.2	39.4	24.2	6.1
	F	13.2	17.0	39.6	24.5	5.7
Grade 11:	M	3.4	27.6	41.4	20.7	6.9
	F	6.1	18.4	38.8	30.6	6.1
Grade 12:	M	16.7	23.3	26.7	30.0	3.3
	F	27.8	36.1	22.2	11.1	2.8

TABLE 79

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 13

Question 13: Are you satisfied with the type of textbook(s) or printed materials you are using in the French course?

a) Very satisfied
b) quite satisfied
c) fairly satisfied
d) somewhat dissatisfied
e) very dissatisfied

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	17.3	38.5	11.5	25.0	7.7
	F	19.2	36.5	26.9	15.4	1.9
Grade 8:	M	11.1	20.0	26.7	26.7	15.6
	F	13.3	25.0	20.0	28.3	13.3
Grade 9:	M	16.2	27.0	37.8	10.8	8.1
	F	9.4	37.5	39.1	12.5	1.6
Grade 10:	M	3.0	21.2	57.6	12.1	6.1
	F	13.2	26.4	35.8	15.1	9.4
Grade 11:	M	6.9	27.6	41.4	17.2	6.9
	F	10.2	36.7	28.6	18.4	6.1
Grade 12:	M	10.0	40.0	26.7	20.0	3.3
	F	36.1	27.8	19.4	11.1	5.6

TABLE 80

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 15

Question 15: How much do you like your courses taught in French (e.g. Etudes Sociales) compared to courses taught in English?

a) very much
b) as much as any other course
c) a bit
d) not at all

Answer choice:		a)	b)	c)	d)
Grade 7:	M	15.4	61.5	17.3	5.8
	F	11.5	71.2	15.4	1.9
Grade 8:	M	8.9	42.2	37.8	11.1
	F	6.7	43.3	35.0	15.0
Grade 9:	M	18.9	45.9	29.7	5.4
	F	4.7	67.2	23.4	4.7
Grade 10:	M	6.1	42.4	24.2	27.3
	F	7.5	52.8	20.8	18.9
Grade 11:	M	0.0	58.6	27.6	13.8
	F	4.1	59.2	28.6	8.2
Grade 12:	M	20.0	53.3	20.0	6.7
	F	11.1	72.2	2.8	13.9

TABLE 81

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 17

Question 17: Compared to your other courses such as English, Math and Science, the study of French is:

a) very easy
b) rather easy
c) no more difficult
d) somewhat difficult
e) very difficult

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	1.9	19.2	32.7	25.0	21.2
	F	1.9	3.8	32.7	48.1	13.5
Grade 8:	M	2.2	15.6	51.1	11.1	20.0
	F	0.0	20.0	48.3	28.3	3.3
Grade 9:	M	0.0	24.3	51.4	21.6	2.7
	F	1.6	12.5	43.8	39.1	3.1
Grade 10:	M	6.1	15.2	45.5	27.3	6.1
	F	0.0	13.2	37.7	35.8	13.2
Grade 11:	M	0.0	37.9	48.3	13.8	0.0
	F	0.0	14.3	55.1	22.4	8.2
Grade 12:	M	6.7	20.0	40.0	30.0	3.3
	F	0.0	19.4	30.6	41.7	8.3

TABLE 82

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 18

Question 18: If you had the opportunity to change the amount of time French is taught in this school, you would:

a) increase the amount of time devoted to French
b) not change the amount of time devoted to French
c) decrease the amount of time devoted to French

Answer choice:		a)	b)	c)
Grade 7:	M	28.8	61.5	9.6
	F	46.2	51.9	1.9
Grade 8:	M	17.8	62.2	20.0
	F	20.0	66.7	13.3
Grade 9:	M	24.3	62.2	13.5
	F	23.4	67.2	9.4
Grade 10:	M	24.2	60.6	15.2
	F	35.8	52.8	11.3
Grade 11:	M	13.8	75.9	10.3
	F	44.9	53.1	2.0
Grade 12:	M	56.7	43.3	0.0
	F	50.0	50.0	0.0

TABLE 83

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 33

Question 33: After I finish my high school, I will probably:

a) make no attempt to use or remember the French I have learned
b) continue to improve my knowledge of French by watching French television, etc.
c) try to use my knowledge of French as often as possible

Answer choice:		a)	b)	c)
Grade 7:	M	5.8	19.2	75.0
	F	0.0	19.2	80.8
Grade 8:	M	8.9	15.6	75.6
	F	5.0	21.7	73.7
Grade 9:	M	0.0	21.6	78.4
	F	1.6	10.9	87.5
Grade 10:	M	12.1	21.2	66.7
	F	1.9	5.7	92.5
Grade 11:	M	6.9	13.8	79.3
	F	0.0	10.2	89.8
Grade 12:	M	6.7	13.3	80.0
	F	0.0	27.8	72.2

TABLE 84

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 35

Question 35: In what language(s) would you prefer studying Social Studies?

a) English only
b) either French or English
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	9.6	11.5	69.2	9.6
	F	7.7	7.7	76.9	7.7
Grade 8:	M	22.2	20.0	51.1	6.7
	F	20.0	15.0	58.3	6.7
Grade 9:	M	18.9	2.7	73.0	5.4
	F	26.6	9.4	57.8	6.3
Grade 10:	M	45.5	15.2	39.4	0.0
	F	28.3	20.8	43.4	7.5
Grade 11:	M	31.0	20.7	44.8	3.4
	F	26.5	8.2	53.1	12.2
Grade 12:	M	10.0	10.0	63.3	16.7
	F	19.4	11.1	58.3	11.1

TABLE 85

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 36

Question 36: In what language(s) would you prefer studying Mathematics?

a) English only
b) either French or English
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	55.8	3.8	32.7	7.7
	F	61.5	9.6	23.1	5.8
Grade 8:	M	77.8	8.9	13.3	0.0
	F	81.7	6.7	11.7	0.0
Grade 9:	M	56.8	13.5	24.3	5.4
	F	85.9	4.7	9.4	0.0
Grade 10:	M	75.8	3.0	18.2	3.0
	F	73.6	9.4	15.1	1.9
Grade 11:	M	96.6	3.4	0.0	0.0
	F	77.6	14.3	6.1	2.0
Grade 12:	M	73.3	0.0	26.7	0.0
	F	66.7	13.9	19.4	0.0

TABLE 86

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 37

Question 37: In what language(s) would you prefer studying Science?

a) English only
b) either French or English
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	15.4	19.2	44.2	21.2
	F	13.5	11.5	51.9	23.1
Grade 8:	M	64.4	13.3	20.0	2.2
	F	45.0	15.0	40.0	0.0
Grade 9:	M	56.8	13.5	24.3	5.4
	F	71.9	12.5	14.1	1.6
Grade 10:	M	57.6	12.1	27.3	3.0
	F	62.3	13.2	22.6	1.9
Grade 11:	M	89.7	6.9	3.4	0.0
	F	53.1	20.4	22.4	4.1
Grade 12:	M	53.3	6.7	36.7	3.3
	F	50.0	13.9	36.1	0.0

TABLE 87

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 38

Question 38: In what language(s) would you prefer studying Home Economics (cooking and sewing) and Industrial Arts (woodwork, etc.)?

a) English only
b) either French or English
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	26.9	9.6	46.2	17.3
	F	13.5	9.6	65.4	11.5
Grade 8:	M	24.4	8.9	57.8	8.9
	F	15.0	13.3	58.3	13.3
Grade 9:	M	13.5	18.9	54.1	13.5
	F	4.7	21.9	57.8	15.6
Grade 10:	M	18.2	15.2	48.5	18.2
	F	15.1	18.9	47.2	18.9
Grade 11:	M	24.1	13.8	37.9	24.1
	F	6.1	20.4	53.1	20.4
Grade 12:	M	6.7	10.0	56.7	26.7
	F	2.8	11.1	52.8	33.3

TABLE 88

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 39

Question 39: In what language(s) would you prefer studying Business Education (Typewriting, accounting, shorthand) ?

a) English only
b) either French or English
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	19.2	5.8	61.5	13.5
	F	21.2	19.2	53.8	5.8
Grade 8;	M	28.9	8.9	60.0	2.2
	F	26.7	13.3	53.3	6.7
Grade 9:	M	10.8	18.9	56.8	13.5
	F	15.6	23.4	57.8	3.1
Grade 10:	M	15.2	21.2	57.6	6.1
	F	22.6	18.9	49.1	9.4
Grade 11:	M	31.0	24.1	41.4	3.4
	F	12.2	16.3	61.2	10.2
Grade 12:	M	23.3	13.3	53.3	10.0
	F	13.9	11.1	75.0	0.0

TABLE 89

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 40

Question 40: In what language(s) would you prefer studying Religion?

a) English only
b) either French or English
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	5.8	13.5	26.9	53.8
	F	3.8	7.7	25.0	63.5
Grade 8:	M	20.0	17.8	33.3	28.9
	F	6.7	15.0	38.3	40.0
Grade 9:	M	18.9	18.9	21.6	40.5
	F	9.4	20.3	28.1	42.2
Grade 10:	M	9.1	9.1	39.4	42.4
	F	3.8	24.5	34.0	37.7
Grade 11:	M	3.4	24.1	44.8	27.6
	F	2.0	34.7	40.8	22.4
Grade 12:	M	3.3	23.3	36.7	36.7
	F	0.0	11.1	63.9	25.0

TABLE 90

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 41

Question 41: In what language would you prefer studying Fine Arts ?

a) English only
b) either English or French
c) both French and English
d) French only

Answer choice:		a)	b)	c)	d)
Grade 7:	M	21.2	9.6	50.0	19.2
	F	1.9	9.6	69.2	19.2
Grade 8:	M	28.9	13.3	44.4	13.3
	F	20.0	11.7	65.0	3.3
Grade 9:	M	16.2	18.9	51.4	13.5
	F	21.9	26.6	43.8	7.8
Grade 10:	M	15.2	0.0	63.3	21.2
	F	11.3	26.4	35.3	17.0
Grade 11:	M	3.4	27.6	55.2	13.8
	F	10.2	18.4	57.1	14.3
Grade 12:	M	0.0	23.3	53.3	23.3
	F	2.8	8.3	69.4	19.4

TABLE 91

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 42

Question 42: Do you wish you could speak, read and write French very well?

a) no
b) maybe
c) yes
d) very much so

Answer choice:		a)	b)	c)	d)
Grade 7:	M	3.8	5.8	48.1	42.3
	F	0.0	3.8	38.5	57.7
Grade 8:	M	2.2	8.9	55.6	33.3
	F	2.2	10.0	38.3	48.3
Grade 9:	M	0.0	5.4	43.2	51.4
	F	0.0	1.6	48.4	50.0
Grade 10:	M	0.0	9.1	48.5	42.4
	F	0.0	1.9	50.9	47.2
Grade 11:	M	0.0	6.9	55.2	37.9
	F	0.0	0.0	34.7	65.3
Grade 12:	M	0.0	0.0	43.3	56.7
	F	0.0	0.0	27.8	72.2

TABLE 92

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 43

Question 43: The main reason I attend Ecole J.H. Picard School is:

a) I want to obtain a bilingual education, i.e. be able to have a good knowledge of French and English.
b) My parents oblige me to attend this school.
c) My friends attend this school.
d) Reasons a) and c)
e) Reasons b) and c)

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	51.9	3.8	5.8	26.9	11.5
	F	51.9	7.7	1.9	28.8	9.6
Grade 8:	M	51.1	15.6	4.4	17.8	11.1
	F	51.7	13.3	1.7	26.7	6.7
Grade 9:	M	43.2	13.5	2.7	35.1	5.4
	F	64.1	7.8	1.6	21.9	4.7
Grade 10:	M	42.4	18.2	9.1	9.1	21.2
	F	67.9	7.5	3.8	18.9	1.9
Grade 11:	M	41.4	3.4	0.0	51.7	3.4
	F	65.3	6.1	0.0	24.5	4.1
Grade 12:	M	46.7	0.0	3.3	40.0	10.0
	F	69.4	2.8	0.0	25.0	2.8

TABLE 93

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 44

Question 44: Being able to have conversations with other French-speaking people.

a) no interest
b) a little interest
c) average interest
d) much interest

Answer choice:		a)	b)	c)	d)
Grade 7:	M	5.8	13.5	44.2	36.5
	F	0.0	5.8	42.3	51.9
Grade 8:	M	6.7	20.0	48.9	24.4
	F	3.3	11.7	41.7	43.3
Grade 9:	M	5.4	2.7	51.4	40.5
	F	3.1	6.3	20.3	70.3
Grade 10:	M	6.1	15.2	42.4	36.4
	F	0.0	3.8	39.6	56.6
Grade 11:	M	3.4	13.8	41.4	41.4
	F	0.0	8.2	28.6	63.3
Grade 12:	M	0.0	3.3	36.7	60.0
	F	0.0	0.0	25.0	75.0

TABLE 94

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 45

Question 45: Being able to listen to radio programs and/or attend French plays.

a) no interest
b) a little interest
c) average interest
d) much interest

Answer choice:		a)	b)	c)	d)
Grade 7:	M	11.5	17.3	36.5	34.6
	F	5.8	7.7	42.3	44.2
Grade 8:	M	11.1	33.3	28.9	26.7
	F	11.7	20.0	40.0	28.3
Grade 9:	M	13.5	32.4	32.4	21.6
	F	12.5	18.8	37.5	31.3
Grade 10:	M	15.2	9.1	33.3	42.4
	F	9.4	18.9	49.1	22.6
Grade 11:	M	20.7	17.2	37.9	24.1
	F	10.2	26.5	38.8	24.5
Grade 12:	M	00.0	3.3	70.0	26.7
	F	00.0	5.6	33.3	61.1

TABLE 95

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 46

Question 46: Being able to watch French television programs.

a) no interest
b) a little interest
c) average interest
d) much interest

Answer choice:		a)	b)	c)	d)
Grade 7:	M	17.3	17.3	32.7	32.7
	F	3.8	21.2	42.3	32.7
Grade 8:	M	24.4	35.6	28.9	11.1
	F	15.0	25.0	40.0	20.0
Grade 9:	M	10.8	37.8	29.7	21.6
	F	4.7	34.4	32.8	28.1
Grade 10:	M	15.2	18.2	33.3	33.3
	F	15.1	30.2	35.8	18.9
Grade 11:	M	17.2	20.7	37.9	24.1
	F	6.1	28.6	55.1	10.2
Grade 12:	M	3.3	16.7	50.0	30.0
	F	5.6	11.1	50.0	33.3

TABLE 96

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 47

Question 47: Being able to read French newspapers, French magazines, etc...

a) no interest
b) a little interest
c) average interest
d) much interest

Answer choice:		a)	b)	c)	d)
Grade 7:	M	17.3	19.2	34.6	28.8
	F	7.7	17.3	40.4	34.6
Grade 8:	M	22.2	22.2	37.8	17.8
	F	8.3	30.0	35.0	26.7
Grade 9:	M	8.1	24.3	51.4	16.2
	F	6.3	23.4	37.5	32.8
Grade 10:	M	15.2	21.2	45.5	18.2
	F	17.0	7.5	43.4	32.1
Grade 11:	M	3.4	24.1	55.2	17.2
	F	8.2	22.4	42.9	26.5
Grade 12:	M	0.0	20.0	40.0	40.0
	F	5.6	11.1	27.8	55.6

TABLE 97

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 49

Question 49: Do You read any newspaper, magazine or book written in French?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	3.8	13.5	42.3	30.8	9.6
	F	3.8	15.4	53.8	25.0	1.9
Grade 8:	M	2.2	6.7	51.1	33.3	6.7
	F	1.7	13.3	43.3	38.3	3.3
Grade 9:	M	2.7	16.2	54.1	21.6	5.4
	F	3.1	10.0	56.3	28.1	1.6
Grade 10:	M	0.0	15.2	48.5	21.2	15.2
	F	7.5	9.4	60.4	17.0	5.7
Grade 11:	M	0.0	10.3	58.6	31.0	0.0
	F	2.0	16.3	57.1	16.3	8.2
Grade 12:	M	3.3	20.0	50.0	26.7	0.0
	F	11.1	22.2	50.0	16.7	0.0

TABLE 98

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 50

Question 50: Do you listen to French radio programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	3.8	15.4	23.1	28.8	28.8
	F	0.0	17.3	25.0	25.0	32.7
Grade 8:	M	0.0	8.9	24.4	40.0	26.7
	F	1.7	3.3	25.0	33.3	36.7
Grade 9:	M	5.4	8.1	16.2	48.6	21.6
	F	0.0	6.3	28.1	31.3	34.4
Grade 10:	M	3.0	3.0	36.4	33.3	24.2
	F	1.9	7.5	18.9	47.2	24.5
Grade 11:	M	0.0	6.9	34.5	31.0	27.6
	F	2.0	4.1	10.2	40.8	42.9
Grade 12:	M	3.3	16.7	16.7	40.0	23.3
	F	0.0	8.3	36.1	36.1	19.4

TABLE 99

SEX BY GRADE FREQUENCY COUNT IN PERCENTAGES ON QUESTION 51

Question 51: Do you watch French television programs?

a) Always
b) Often
c) Sometimes
d) Seldom
e) Never

Answer choice:		a)	b)	c)	d)	e)
Grade 7:	M	0.0	17.3	50.0	21.2	11.5
	F	5.8	21.2	44.2	25.0	3.8
Grade 8:	M	2.2	8.9	22.2	51.1	15.6
	F	0.0	15.0	33.3	30.0	21.7
Grade 9:	M	5.4	8.1	45.9	32.4	8.1
	F	1.6	14.1	35.9	34.4	14.1
Grade 10:	M	6.1	15.2	45.5	24.2	9.1
	F	3.8	9.4	37.7	30.2	18.9
Grade 11:	M	0.0	13.8	51.7	27.6	6.9
	F	0.0	12.2	26.5	40.8	20.4
Grade 12:	M	6.7	23.3	40.0	23.3	6.7
	F	0.0	19.4	47.2	25.0	8.3

TABLE 100

RANKING AND GROUPING OF STUDENTS ON WORD-COMPLETION BALANCE MEASURE

Original Groups	Raw Score on Balance Measure	Number of students in group	Combined groups used in study	Language Dominance
1	17-19	9		
2	20-22	11	51	French
3	23-25	31		Dominant
4	26-28	47	47	
5	29-31	97	97	No dominance
6	32-34	117	117	
7	35-37	82	82	English
8	38-40	64	64	
9	41+	82	82	Dominant

TABLE 101

RANKING AND GROUPING

OF STUDENTS ON WORD-ASSOCIATION BALANCE MEASURE

Original Groups	Raw Score on Balance Measure	Number of students in group	Combined groups used in study	Language Dominance
1	17-19	0		
2	20-22	10		French
3	23-25	7	48	
4	26-28	31		Dominant
5	29-31	83	83	No dominance
6	32-34	108	108	English
7	35-37	100	100	
8	38-40	109	109	
9	41+	92	92	Dominant

TABLE 102

RANKING AND GROUPING OF STUDENTS ON SOCIOECONOMIC SCALE

Original Groups	Number in Group	Combined groups used in study	Income group Classification
1	41	41	Upper
2	164	164	Upper-middle
3	43		
4	33	116	Middle
5	40		
6	64		
7	26	90	Lower-middle
8	20		
9	109	129	Lower